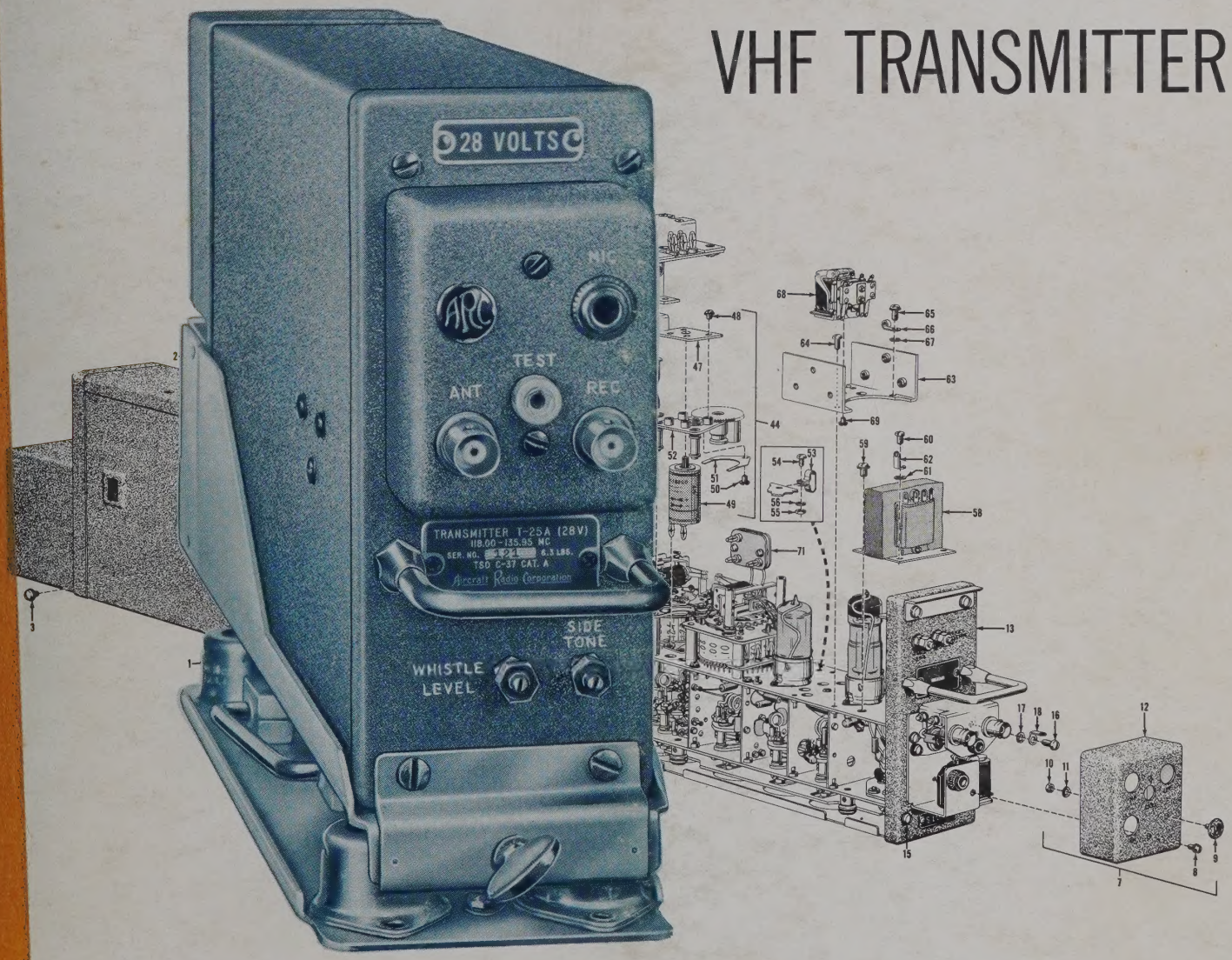
Overhaul Instructions and Parts Catalog for ARC TYPE T-25A VHF TRANSMITTER



Aircraft Radio Corporation
Boonton, New Jersey

Overhaul Instructions

for

ARC TYPE T-25A

VHF TRANSMITTER

AIRCRAFT RADIO CORPORATION
Boonton, New Jersey

7010098
ARCOC-T25A-1
April 1960

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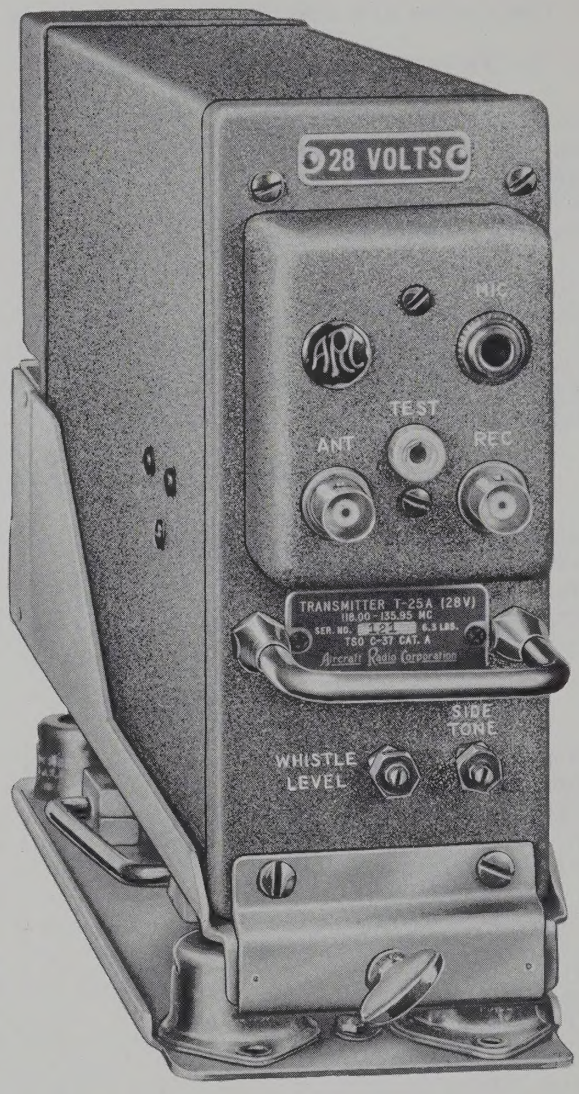

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Figure 1-1. ARC Type T-25A Transmitter with ARC Type M-41A Mounting

SECTION I

GENERAL INFORMATION

1-1. INTRODUCTION.

This book contains overhaul instructions for the ARC Type T-25A VHF Transmitter (Figure 1-1), manufactured by Aircraft Radio Corporation, Boonton, New Jersey. Instructions are provided for disassembly, cleaning, inspection, repair, replacement, lubrication, reassembly, and testing. Similar information is also included for the ARC Type DV-12A Dynaverter® and the ARC Type C-82A Control Unit.

1-2. PURPOSE.

The ARC Type T-25A VHF Transmitter is an airborne, 360-channel, voice amplitude-modulated transmitter. The transmitter is electrically tuned and crystal-controlled, with a frequency range of 118.00-135.95 mc. The DV-12A, which is installed on the rear of the T-25A inside the dust cover, may be used to supply high voltage. The C-82A is used to control the primary power and selects the operating frequency of the T-25A.

1-3. DESCRIPTION.

T-25A Transmitter. The T-25A is a miniaturized VHF Transmitter consisting of two major assemblies: a transmitter assembly which contains all transmitting circuits and serves as the main chassis for the unit, and a plug-in modulator assembly which is fastened to the bottom of the transmitter assembly. The transmitter assembly consists of a front plate assembly, a gearing assembly, and a transmitter subassembly. The transmitter subassembly includes a tuner assembly and the major portion of the transmitting circuits.

The 28-volt model of the T-25A requires a primary power source of 2.0 amperes at 27.5 volts dc. The 14-volt model requires 3.0 amperes at 13.75 volts dc. Each model requires high-voltage power of 140 ma at 250 volts dc. High voltage may be obtained from an ARC Type DV-12A Dynaverter mounted on the rear of the T-25A, or from a Dynaverter or dynamotor mounted on an associated vhf receiver or ARC Type P-12A Power Unit. All electrical connections to the T-25A, except the antenna connection, are made through a single receptacle located at the rear of the unit. The receptacle mates with a connector plug on the ARC Type M-41A Mounting used with the transmitter.

DV-12A Dynaverter. The ARC Type DV-12A Dynaverter is a transistorized power converter designed to transform low-voltage dc to high-voltage dc. The unit is a plug-in module designed to mount on the rear of the T-25A and to be contained within the T-25A dust cover. All parts of the DV-12A are housed in a small aluminum chassis, with the power transistors securely fastened to the frame to promote heat dissipation. Four No. 4 captive screws are provided for securing the DV-12A to the T-25A. Input and output connections are made through a three-terminal plug located on the front of the unit. The DV-12A can be added to the T-25A without any change in external wiring.

C-82A Control Unit. The ARC Type C-82A Control Unit is an edge-lighted, plastic-panel control assembly designed for use in aircraft equipped with console mounting facilities. The C-82A contains a primary power on-off switch, and channel selector switches which are used to select the transmitting frequency. The megacycle channel selector switch is a geared, 18-position, printed-circuit, revolving drum assembly which controls the positioning of the megacycle crystal drum in the T-25A. The fractional megacycle channel selector switch is a 20-position, revolving drum assembly which controls the positioning of the fractional megacycle crystal drum in the T-25A. The selected frequency is indicated on the individual dials associated with each switch. Edge-lighting illumination of the controls and panel designations is provided by two midget flange-base lamps installed in red-filter light assemblies located on the plastic panel. All electrical connections to the C-82A are made through a receptacle located at the rear. The unit is secured by four Dzus fasteners on the front panel.

> Note
>
> In place of a C-82A Control Unit, a custom control installation with Channel Selector Switch ARC-20730 or ARC Type CC-10A Custom Control Unit, and a power on-off switch, may be used.

SECTION II

OVERHAUL INSTRUCTIONS

2-1. GENERAL.

This section contains overhaul procedures for the ARC Type T-25A VHF Transmitter, ARC Type DV-12A Dynaverter, and ARC Type C-82A Control Unit. Obvious procedures, such as unsoldering and resoldering of wiring, are omitted.

Special care must be taken when removing parts mounted on the printed-circuit boards. Wire leads of parts being removed should be cut off close to the printed-circuit board. Pulling a part out by its body may damage the board because of crimped leads on the parts. The leads should therefore be cut and a lightweight, pencil soldering iron used for unsoldering, with heat applied no longer than necessary. Pull the cut-off leads out as the solder melts.

Setscrews and some other threaded parts are sealed with Loctite Sealant or Glyptal enamel. Normal force should break the seal; if difficulty occurs, apply soldering iron heat to sealed parts to aid removal.

When replacing a semiconductor diode, transistor, or subminiature electron tube, orient the part correctly and route its leads as nearly like the original installation as possible. Keep the spacing between leads at least 1/16 inch. When soldering a semiconductor diode or transistor, hold the leads with pliers between body and solder joint. The pliers form a heat sink to prevent heat damage to the diode or transistor. Do not remove pliers until solder-joint heat has been dissipated. Use as small an amount of solder as possible on all joints. After replacing parts on a printed-circuit board, wait for the board to cool. Brush Dow-Corning No. 991 Silicone Varnish over the area to make the surface moisture-resistant.

2-2. T-25A TRANSMITTER.

Disassembly.

> Note
>
> Disassemble the T-25A only to the extent required for repair or replacement of parts.
>
> Where removal and disassembly procedures are apparent from the exploded views, or upon inspection of the unit, no special instructions are included.

Modulator Assembly. To remove the modulator assembly, proceed as follows:

Step 1. Remove six screws (2, Figure 2-1) from bottom of transmitter and six screws (3) from sides. Slide off cover (1).

Step 2. Turn transmitter bottom up. Loosen four captive screws (5) and washers (6).

Step 3. Grasp modulator assembly (4) near rear of unit. Use a gentle, rocking motion, with an upward pull, to free modulator assembly.

When disassembling the modulator assembly, special care must be taken to avoid damage to the printed-circuit board. When removing transformers (18 and 21, Figure 2-2), soldering-iron heat should be applied simultaneously to all terminals of a transformer to aid in removal. A special soldering iron tip is required for this procedure. Use a short length (approximately 4 inches) of No. 10 AWG, or larger, bus wire, and form it so that all transformer terminals can be contacted at the same time.

Bracket Assembly. To remove and disassemble the bracket assembly, proceed as follows:

Step 1. Remove screw (20, Figure 2-1) attaching bracket assembly (19) to gearing assembly (44). Remove two screws (21) attaching bracket assembly to tuner assembly (1, Figure 2-4), and take off bracket assembly.

Step 2. Remove screw (29) to free insulator (28) and washer (30). Remove screw (32) to free insulator (31) and washer (33). Remove screw (35) and washer (36) to remove terminals (34).

Step 3. Remove two nuts (25), terminal (26), and two lockwashers (27), and slide out relay (24).

Step 4. Remove five screws (41) and stud (42); take out connector (40) from bracket assembly (19).

Gearing Assembly. To remove and disassemble the gearing assembly, proceed as follows:

Step 1. Loosen two screws (45, Figure 2-1), and pull gearing assembly (44) up to remove it from transmitter subassembly (72).

Step 2. Remove four screws (48) from bracket (47). Removal of bracket permits removal of screws (45) and washers (46).

Step 3. Remove screw (50) and disengage spring (51) to remove motor (49) from gearing subassembly (52).

Transmitter Subassembly. Except for the tuner assembly, tuning plate assembly, and tuning shaft with their associated parts, the procedures required to disassemble the transmitter subassembly are obvious upon inspection of the unit and reference to Figure 2-4. The special procedures required are described in the paragraphs which follow.

Tuner Assembly. To remove and disassemble the tuner assembly, proceed as follows:

Step 1. Disconnect connectors (57, Figure 2-1).

Step 2. Remove screws (2, Figure 2-4) from corners of tuner assembly (1). Remove post (3) and washer (4). Lift off tuner assembly.

Step 3. Remove four screws (2, Figure 2-5) attaching two relays (1). If necessary, remove eight setscrews (3) from relay mounting posts.

Step 4. Remove spring (4).

Step 5. Remove ring (6) and washer (7). Release spring (8), and remove pawl (5) and washer (7).

Step 6. Remove ring (10) and washer (11). Release spring (12), and remove pawl (9) and washer (11).

Step 7. Remove ring (13) and washer (14). Release spring (15). Disengage pawl (16) from teeth of ratchet assembly (43), and lift off right-hand lever assembly.

Step 8. From right-hand lever assembly, detach ring (17) to remove pawl (16). Remove spring (18), screw (19), washers (20 and 21), post (22), and lever (23).

Step 9. Remove ring (24) and washer (25). Release spring (26). Disengage pawl (27) from teeth of ratchet assembly (44), and lift off left-hand lever assembly.

Step 10. From left-hand lever assembly, detach ring (28) to remove pawl (27). Remove spring (29), screw (30), washers (31 and 32), post (33), and lever (34).

Step 11. Remove four posts (36) to release two plates (35).

Step 12. Remove three screws (38) to release plate (37).

Step 13. From each plate (42) and ratchet assembly (43 or 44), remove two springs (39), one nut (40), and washer (41).

Step 14. Remove plates (42) and ratchet assemblies (43 and 44) from studs (48). Remove bushings (45), and push studs and washers (46) out through tuner bottom. Remove two plates (47) and washers (46).

Step 15. Remove one ring (50) and washer (51) from each bearing (49), and remove both bearings from panel (52).

Tuning Plate Assembly. To remove the tuning plate assembly and associated parts, proceed as follows:

Step 1. If dial (5, Figure 2-4) has not been removed, index it to the 118-mc (minimum cam throw) position.

Step 2. Remove four springs (73 and 77) and five terminal lugs (78, 79, and 80) from terminals (68) and arm assemblies (81). Remove two screws (69) to release terminals (68).

Step 3. Remove four setscrews (71), and carefully slide bearings (70) and plate assembly (67) from lower mounting plate posts. Remove washers (72) from posts.

Step 4. Remove two setscrews (75) to release cam (74). Remove ring (87), and slide lever subassembly (86) from its post.

Step 5. Unscrew and remove five arm assemblies (81). Remove five setscrews (83) to release five blocks (82). Remove washers (84) and spacer (85).

Step 6. Remove ring (129) and washer (130) to release bearing (128). Take out shaft (76).

Fractional Megacycle Tuning Shaft. To remove the fractional megacycle tuning shaft and associated parts, proceed as follows:

Step 1. If dial (6, Figure 2-4) has not been removed, index it to the .95-mc (minimum cam throw) position. Hold bracket assembly (131) against pressure of spring (134), and remove setscrew (132) and disc (133). Remove setscrew (171) and disc (172) from plate assembly (170).

Step 2. Push shaft (173) out through transmitter front. Take out bracket assembly (131), spring (134), and plate assembly (170).

Step 3. Remove ring (153) to release bearing (152). Remove ring (184) to release bearing (183).

Cleaning. Materials required to clean parts of the T-25A are listed in Table 2-1. Parts which are made entirely of metal, such as hardware, plates, bearings, springs, and cams, should be cleaned with a lintless cloth moistened with Varsol. After cleaning, dry parts with clean, oil-free, compressed air at 5 - 10 psi.

Use a small brush dipped in Varsol to clean metallic contacts of switches, connectors, relays, and variable capacitors. Dry parts with compressed air. Clean nonmetallic items with compressed air and a dry, lintless cloth.

Inspection and Test. All parts should be inspected, using a jeweler's loupe if necessary, for signs of wear, corrosion, stripped threads, cracked insulation, or other visible defects. Specific inspection and test procedures are listed in Table 2-2.

TABLE 2-1. CLEANING, PROTECTIVE, AND SEALING MATERIALS

Material	Manufacturer and Description
	CLEANING MATERIALS
Varsol	Esso Standard Oil Co. (Varsol is a petroleum naphtha of the Stoddard solvent class.) Solvent, Dry-cleaning, per Federal Specification P-S-661, may also be used.
Brushes	Nonmetallic, various sizes.
Lintless Cloths	
	PROTECTIVE MATERIALS
Gray Wrinkle Finish	Duralac Chemical Corp., No. 203-L2941, with reducer No. H-1555.
Lubricating Grease	Shell Oil Co., Aeroshell No. 7 Grease.
Lubricating Oil	Eclipse-Pioneer Div. of Bendix Aviation Corp., Pioneer No. 10 Oil.
Silicone Fluid	Dow-Corning Co., 510 Silicone Fluid.
	SEALING MATERIALS
Sealing Enamel	General Electric Co., black Glyptal enamel No. 1224, with Glyptal thinner No. 1500.
Sealing Enamel	General Electric Co., red Glyptal enamel No. 1201, with Glyptal thinner No. 1500.
Sealing Enamel	General Electric Co., gray Glyptal enamel No. 7496, with Glyptal thinner No. 1500.
Sealant[1]	American Sealants Co., Loctite Sealant, Fluorescent E, with Locquic Activator.
Silicone Varnish	Dow-Corning Co., Silicone Varnish No. 991, with Xylene thinner.
Silicone Grease	Dow-Corning Co., 4 Compound.

[1] Loctite Sealant is reusable and new sealant is needed only if both setscrew and part are replaced or excessively heated. Where specified, use as small an amount of sealant as possible on threads before assembly. Be extremely careful that sealant does not get on any other parts.

TABLE 2-2. INSPECTION AND TEST PROCEDURES

Part	Procedure
Motor (49, Figure 2-1)	Check no-load starting voltage. With motor at room temperature, apply power from 0- to 30-volt dc supply to terminals of P201. For 14-volt model, motor should start with 1.25 volts applied. For 28-volt model, motor should start with 2.5 volts applied.
Relays (35, Figure 2-3 and 1, Figure 2-5)	Check pull-in voltage. Apply power from 0- to 30-volt dc supply to relay coil terminals. For 14-volt model, relay should not operate with 4 volts applied; with 9 volts applied, relay should operate. For 28-volt model, relay should not operate with 9 volts applied; with 18 volts applied, relay must operate.
Relays (24, Figure 2-1 and 28, Figure 2-3)	Check pull-in and drop-out voltages. Apply power from 0- to 30-volt dc supply to coil terminals of relay. For 14-volt model, relay should operate with 6.9 volts (maximum) applied; the relay should drop out with between 0.8 and 3.6 volts applied. For 28-volt model, relay should operate with 13.5 volts (maximum) applied; the relay should drop out with between 1.5 and 7 volts applied.
Ball Bearings	Inspect for smoothness of rotation. Hold outer bearing race and check for excessive side play of inner race.
Crystals (9 and 10, Figure 2-4)	Inspect for abnormal wear of individual pins. To equalize pin wear, crystals may be reversed when reinstalling.
Zener Diode CR301 (40, Figure 2-2)	Test diode. Connect cathode to positive terminal of 28-volt dc supply. Connect plate to negative terminal through 60-ohm, 5-watt resistor. Voltage across diode should be 10±1/2 volts.
Zener Diode CR302 (34, Figure 2-2)	Test diode. Connect cathode to positive terminal of 40-volt dc supply. Connect plate to negative terminal through 39-ohm, 1/2-watt resistor. Voltage across diode should be 36±4 volts.
Transistors (5, 9, 29, 31, Figure 2-2)	Test transistors. Connect transistor under test in circuit shown in Figure 2-6. Connect appropriate resistance value for R1, R2, and R3 as listed in Table 2-3. Connect d-c supply and meter as listed in Table 2-3. Press switch S1 and read meter. Normal readings (approximately mid scale) are listed in Table 2-3. If meter reads full scale, transistor is shorted. If meter reads zero or very low, transistor is open.

TABLE 2-3. TRANSISTOR TEST DATA

Transistor		Resistance (ohms)			D-c Supply		Meter			
Ref Desig	Type	R1	R2	R3	Connect + to	Connect - to	Scale (ma)	Connect + to	Connect -to	Reading (ma)
Q301	2N585	820	10K	20K	4	3	10	2	1	5
Q302	2N217	820	10K	20K	3	4	10	1	2	5
Q303	2N375	10	1K	2K	3	4	500	1	2	250
Q304	2N375	10	1K	2K	3	4	500	1	2	250
Q305	2N375	10	1K	2K	3	4	500	1	2	250
Q306	2N375	10	1K	2K	3	4	500	1	2	250
Q307	2N176	10	1K	2K	3	4	500	1	2	250

Reassembly.

Transmitter Subassembly. The procedures required to reassemble the transmitter subassembly are obvious upon inspection of the unit and reference to Figure 2-4, except for those parts and assemblies which require lubrication, adjustment, or special care. Instructions for reassembling these parts and assemblies are included in the paragraphs which follow. Wiring diagrams are shown in Figure 4-5 through 4-11.

Fractional Megacycle Tuning Shaft. To reassemble and replace the fractional megacycle tuning shaft and associated parts, proceed as follows:

Step 1. Insert bearing (152, Figure 2-4), from rear of plate (156), into hole in plate. Secure bearing with ring (153).

Step 2. Insert bearing (183), from rear of plate (189), into hole in plate. Secure bearing with ring (184).

Step 3. Slide shaft (173) through bearing (183). Place plate assembly (170) on shaft between plates (169 and 189) with slugs pointing toward transmitter rear. Slide shaft through plate (169) and bearing (152).

Step 4. If dial (6) has not been removed, index it to the .95-mc (minimum cam throw) position. Place spring (134) over rear of shaft (173). Compress spring by placing bracket assembly (131) in position with its ball bearing resting against cam of gear-cam assembly (13).

Step 5. Slide shaft (173) toward rear of transmitter until approximately 1/16 inch projects through bearing (183). Insert disc (133) and setscrew (132) in bracket assembly (131). Tighten and seal setscrew with red Glyptal enamel.

Step 6. Adjust plate assembly (170) until its slugs penetrate coils (176) as deeply as bracket assembly (131) slugs penetrate coils (140). Rotate plate assembly until slugs are level, then insert and lightly tighten disc (172) and setscrew (171). Do not seal.

Tuning Plate Assembly. To reassemble and replace the tuning plate assembly, proceed as follows:

Step 1. Insert bearing (128, Figure 2-4) into lower mounting plate from the bottom. Place washer (130) over bearing and secure with ring (129), with concave side of ring toward mounting plate. Insert shaft (76), passing it through ring (27) and washer (28).

Step 2. Place spacer (85) over capacitor shaft furthest from cam. Place five blocks (82) over capacitor shafts with beveled edges of blocks toward mounting plate. Seat blocks against capacitor shaft retaining rings, then insert and lightly tighten five setscrews (83).

Step 3. Insert five arm assemblies (81) with spring terminal mounting studs toward mounting plate.

Step 4. Place a small amount of Aeroshell No. 7 Grease on the lever post, and slide lever subassembly (86) onto its post. Secure with ring (87).

Step 5. If shaft (76) and dial (5) have not been removed, index dial to the 135-mc position, otherwise proceed as follows: Place cam (74) on shaft (76) with smaller lobe toward mounting plate. Slide cam onto shaft until smaller cam lobe is centered on lever subassembly (86) ball bearing. Rotate cam until hole in larger cam lobe is over shaft of capacitor (110). If necessary, apply Loctite Sealant to setscrews (75). (If shaft (76) and dial (5) have been removed, Loctite Sealant is not needed.) Insert and tighten setscrews. Check for at least 0.010-inch clearance between large cam lobe and plane of chassis.

Step 6. Place two adjacent bearings (70) over the ends of their mounting posts. Place the other two bearings (70) in position on plate assembly (67), and slide plate assembly into first two bearings, while sliding second two bearings over their mounting posts.

Step 7. Push bearings (70) onto their mounting posts, making certain that ball bearings of the arms and plate assembly fall into proper position on their bearing surfaces. Insert four setscrews (71) into bearings and tighten lightly.

Step 8. Rotate cam (74) to minimum-throw position. Slide plate assembly (67) back and forth in bearings (70) and check for side play. Loosen setscrews (71) to rotate bearings (bearing shells are eccentric), and adjust for minimum side play without binding. The plate assembly must remain parallel to transmitter chassis, and capacitor shafts must be centered in plate cutouts.

Step 9. Check for 0.010-inch clearance between plate assembly (67) and blocks (82). See that ball bearings contact entire width of plate or cam. If adjustment is required, add shim washers (72) under bearings (70) or washers (84) under blocks (82) as required. Seal setscrews (71) with Loctite Sealant. Lubricate wearing surfaces of plate with a small amount of Aeroshell No. 7 Grease.

Step 10. Replace two terminals (68) and secure with two screws (69). Seal screws with red Glyptal enamel.

Step 11. Attach small end of one long (7/16-inch) terminal lug (78) to one end of one spring (77). Place large end of terminal lug over stud on arm assembly (81) closest to cam (74). Attach other end of spring to terminal (68).

Step 12. Attach small end of remaining long terminal lug (78) to one end of another spring (77). Attach small end of one short (1/4-inch) terminal lug

(79) to other end of spring, and place large ends of terminal lugs over studs on second and third arm assemblies (81) away from cam (74).

Step 13. Attach small end of remaining short terminal lug (79) to one end of remaining spring (77). Attach other end of spring to small end of remaining (5/8-inch) terminal lug (80), and place large ends of terminal lugs over studs on fourth and fifth arm assemblies (81) away from cam (74). If necessary, bend terminal lugs outward to clear blocks.

Step 14. Place long end of spring (73) in hole in lever subassembly (86), and place the other end over remaining terminal (68).

Crystals and Terminal Blocks. To replace the crystals and terminal blocks and associated parts, proceed as follows:

Step 1. Place terminal blocks (31, Figure 2-4) in position on plate. Terminal block contact springs should point toward adjacent shaft holes. Insert two screws (32) through plate and each terminal block. Place spring washers (34) over screws with concave sides toward screw heads. Place nuts (33) on screws and tighten lightly.

Step 2. Place bearing (26) in plate, from the top. Place washer (28) on other side and secure with ring (27), with concave side of ring toward plate.

Step 3. Check distances from center of shaft holes to forward edges of right-angle contact springs on terminal blocks (31); the distance should be 0.575 inch to nearer spring, and 0.770 inch to other spring.

Step 4. Adjust spring positions, tighten nuts (33), and seal nuts with red Glyptal enamel.

Step 5. Push shaft (173) toward transmitter front. Insert gear-cam assembly (13). Put washer (15) over cam with flat side toward transmitter rear, and secure with ring (14), concave side toward plate.

Step 6. Check clearance between Teflon tips on bracket assembly (131) and plate. If necessary, bend ends of bracket assembly to obtain 0.002- to 0.010-inch clearance. Rotate gear-cam assembly (13) and check that shaft (173) moves freely without binding, and that contact is maintained between the cam and the bearing on bracket assembly (131).

Step 7. Place plate subassembly (11) over shaft (76) so that setscrew hole adjacent to locating stud on plate subassembly is aligned with flat on shaft. If necessary, apply Loctite Sealant to setscrew. Insert setscrew (12) and tighten.

Step 8. Place one crystal (10) in gear-cam assembly (13), matching frequency stamped on crystal to that printed on gear-cam assembly. Rotate gear-cam assembly until crystal pins engage contact springs of terminal block (31). Insert remaining crystals in proper position.

Step 9. Rotate plate subassembly (11) to place locating stud over terminal block (31). Insert crystals (9), matching frequencies stamped on crystals to those printed on plate subassembly.

Step 10. Replace springs (7), and check that each crystal is properly positioned under its spring segment (with screw holes aligned). Secure each spring with four screws (8).

Step 11. Place dial (5) on plate subassembly (11) with numbers reading upward from bottom. Align notch in dial with locating stud on plate subassembly. Place dial (6) on gear-cam assembly (13) with numbers reading upward from bottom. Align notch in dial with locating stud in gear-cam assembly.

Tuner Assembly. To reassemble and replace the tuner assembly, proceed as follows:

Step 1. Insert two bearings (49, Figure 2-5) through holes in top of panel (52). Place one washer (51) over each bearing. Secure bearings and washers with rings (50), with concave sides of rings toward panel.

Step 2. Place one washer (46) on each stud (48). Press one plate (47) on each stud with the flat face against washer. Place one washer (46) on each stud and insert studs through bearings (49). Place bushings (45) on studs with larger diameters toward panel.

Step 3. Place left-hand ratchet assembly (44) on bushing at left-hand side of tuner assembly panel with terminals away from panel and in line with flats on stud (left-hand side of tuner assembly panel contains six small terminal studs; right-hand side, five).

Step 4. Press plate (42) onto stud (48). Place washer (41) over stud. Apply red Glyptal enamel to stud threads and tighten nut (40). Attach small ends of two springs (39) to terminals of ratchet assembly (44).

Step 5. Attach free end of springs to plate (42) tabs so that when pawl (27) presses on ratchet assembly teeth it will increase spring tension.

Step 6. Repeat Step 3, using right-hand ratchet assembly (43) on right side of tuner assembly panel.

Step 7. Repeat Steps 4 and 5, checking spring action with pawl (16). Turn panel until its semicircular cutout is open toward the bottom. Rotate plates (42) until the four slots in the two plates are parallel at top and bottom of tuner assembly panel. When springs (39) are properly connected, the bottom ratchet assembly terminals are pulled away from each other toward side of tuner assembly, and the top ratchet assembly terminals are pulled toward each other and the tuner assembly center.

Step 8. Place plate (37) on panel mounting posts with plate terminals pointed toward panel (52). Insert three screws (38) and tighten.

Step 9. Place plates (35) over posts on bottom of panel. Insert four posts (36) and tighten. Each plate contact spring should press against switch plate (47) with 20 - 50 grams force. Seal posts with red Glyptal enamel.

Step 10. Place washer (31) on screw (30) with convex side of washer toward screw head. Place washer (32) on screw with larger diameter toward screw head.

Step 11. Insert post (33) in pawl (27) from same side as pawl terminal stud. Secure with ring (28). Place lever (34) over pawl (27) so that post (33) is inserted in lever slot, with half-round latching pin on lever away from pawl. Insert screw (30) and washers (31 and 32) and fasten lever to pawl.

Step 12. Rotate pawl (27) until its free end touches indexing pin on lever (34). Orient spring (29) so that its smaller end is over pawl terminal stud, its loop over screw (30), and its larger end over the half-round latching pin. Attach spring to pawl terminal stud, route it under washer (32), and attach it in groove on latching pin.

Step 13. Orient spring (26) so that, with spring loop around lever assembly bearing, shorter spring end will be on the side of the terminal stud which it contacts and longer spring end will be on the same side as indexing pin. Attach both spring ends in position.

Step 14. Place washer (20) on screw (19) with convex side of washer toward screw head. Place washer (21) on screw with larger diameter toward screw head.

Step 15. Insert post (22) in pawl (16), from same side as pawl terminal stud. Secure with ring (17). Place lever (23) over pawl so that post is inserted in lever slot, with half-round latching pin on lever away from pawl. Insert screw (19) and washers (20 and 21) and fasten lever to pawl.

Step 16. Rotate pawl (16) until its free end touches indexing pin on lever (23). Orient spring (18) so that its smaller end is over pawl terminal stud, its loop over screw (19), and its larger end over the half-round latching pin. Attach spring to pawl terminal stud, route it under washer (21), and attach it in groove on latching pin.

Step 17. Orient spring (15) so that, with spring loop around lever assembly bearing, shorter spring end will be on the side of the terminal stud which it contacts and longer spring end will be on the same side as indexing pin. Attach both spring ends in position.

Step 18. Lubricate lever assembly mounting posts with Aeroshell No. 7 Grease. Rotate pawl (27) away from lever (34) and slide lever onto post. Ratchet assembly (44) should fit between outside edges of pawl (27). Rotate pawl (16) away from lever (23) and slide lever onto post. Ratchet assembly (43) should fit between outside edges of pawl (16). Replace rings (24 and 13).

Step 19. Check end play of levers (23 and 34) on their mounting posts. Add washers (25 and 14) as required to obtain end play between 0.005 and 0.010 inch.

Step 20. Place one washer (11) over relay mounting post nearest to left-hand lever assembly mounting post. Place a small amount of Aeroshell No. 7 Grease on washer. Attach smaller end of spring (12) to terminal stud of pawl (9) so that spring loop is over large hole in pawl and other end of spring is on same side as small end of pawl.

Step 21. Place spring (12) and pawl (9) over post with pawl terminal stud pointed downward. Slide pawl and spring downward with small end of pawl opposite end of pawl (27). Place spring in groove on mounting post and attach free end to terminal on pawl. Plate (42) should fit between outside edges of pawl (9). Lubricate both sides of washer (11) with a small amount of Aeroshell No. 7 Grease, slide washer into place, and secure with ring (10).

Step 22. Place one washer (7) over relay mounting post nearest to right-hand lever assembly mounting post. Place a small amount of Aeroshell No. 7 Grease on washer. Attach smaller end of spring (8) to terminal stud of pawl (5) so that spring loop is over large hole in pawl and other end of spring is on same side as small end of pawl.

Step 23. Place spring (8) and pawl (5) over post with pawl terminal stud pointed downward. Slide pawl and spring downward with small end of pawl opposite end of pawl (16). Place spring in groove on mounting post and attach free end to terminal on pawl. Plate (42) should fit between outside edges of pawl (5). Lubricate both sides of washer (7) with a small amount of Aeroshell No. 7 Grease, slide washer into place, and secure with ring (6). Attach spring (4) between small holes in drive-pawl levers.

Step 24. Insert eight setscrews (3) in top and bottom relay mounting post holes with points toward inside of tuner assembly, and turn setscrews until headless ends are flush with mounting post surfaces.

Step 25. Attach relays (1) with four screws (2). Check that each latching spring is properly placed under the lip of the relay armature. The relay will be adjusted after the transmitter is reassembled.

Step 26. Rotate plates (47, Figure 2-5) until their indexing tabs are in line with indexing notches on top of dials (5 and 6, Figure 2-4). Place tuner assembly (1) in position on transmitter subassembly. Check to be certain that dial notches are properly engaged with tabs of tuner assembly and studs of transmitter subassembly.

Step 27. Place washer (4, Figure 2-4) on gear-

ing assembly mounting post (3) with convex side toward shoulder on post. Insert post in panel and tighten. Insert and tighten two screws (2) in tuner assembly corner holes closest to transmitter center.

Gearing Assembly. To reassemble and replace the gearing assembly, proceed as follows:

Step 1. Insert spring (51, Figure 2-1) into groove on motor (49) with concave side of spring toward motor terminals.

Step 2. Invert gearing subassembly (52). Place motor and spring in position and rotate spring slightly. Lower motor to insert motor shaft in hole in gearing subassembly. Insert spring ends into grooves on mounting posts and rotate spring into position. Push spring body toward motor until mounting hole is over insert.

Step 3. Rotate motor body until terminals are parallel to mounting posts and away from cams. Insert screw (50) and tighten.

Step 4. Place one washer (46) on each screw (45) with convex side of washer toward screw head. Insert screws in mounting posts. Place bracket (47) in position and secure with four screws (48).

Step 5. Rotate cams on gearing assembly (44) until they will not interfere with tuner lever arms during seating.

Step 6. Align the motor terminals with their receptacle, and the mounting sleeve with the mounting post, and install gearing assembly by pressing it into position.

Step 7. Secure gearing assembly (44) by tightening two screws (45).

Bracket Assembly. For wiring diagram, refer to Figure 4-2. To reassemble and replace the bracket assembly, proceed as follows:

Step 1. Insert connector (40, Figure 2-1) into bracket assembly (19) from the inside with beveled connector corners toward relay bracket. Insert stud (42) in center hole on side of beveled connector corners. Insert five screws (41) in remaining holes and tighten stud and screws.

Step 2. Insert relay (24) and place one lockwasher (27) over each relay stud. Place terminal (26) on stud farthest from connector (40). Secure relay with nuts (25). Seal the nut over terminal (26) with gray Glyptal enamel.

Step 3. Dip threaded end of screw (35) in red Glyptal enamel, place washer (36) over screw with convex side toward screw head, and insert through concave sides of terminals (34) into insulator (33). Insert screw (32) in hole in bracket assembly (19) away from connector (40). Place washer (33) over screw and insert in insulator (31). Tighten screw. Seal screw and washer with gray Glyptal enamel.

Step 4. Insert screw (29) in bracket assembly (19). Place washer (30) over screw and insert in insulator (28). Tighten screw. Seal screw and washer with gray Glyptal enamel.

Step 5. Insert screws (21) in bracket assembly (19). Place bracket assembly in position on tuner assembly (1, Figure 2-4) and tighten screws. Insert and tighten screw (20) attaching bracket assembly to gearing assembly (44).

Modulator Assembly. For wiring diagram, see Figures 4-3 and 4-4. The procedures required to reassemble and replace the modulator assembly are obvious upon inspection of the unit and reference to Figure 2-2, except for those parts which require lubrication or special care. Instructions for these parts are included in the paragraphs which follow.

When replacing Zener diode (34), place the nickel-plated washer (36) on the diode stud, then place one mica washer (38) on the stud. Insert the diode into the chassis (47). Place the other mica washer on the stud, then place terminal (37) on the stud with the solder lug away from the chassis and pointing toward transistor (31). Place Teflon washer (39) over the stud and secure with nut (35).

When replacing any of the four transistors (29, Figure 2-2), wipe off the insulating plate (30) and apply Dow-Corning DC-4 Compound to both sides of the plate. Place the transistors in position, making sure that the sockets and mounting holes are aligned. Place the metal plate (26) over the transistors. Insert eight bushings (28) and secure them with eight screws (27).

When replacing the modulator assembly (4, Figure 2-1), place the assembly in position on the transmitter, being careful not to strike the electron tubes with the modulator transformers. Align the plugs on the transmitter bracket assembly with the receptacle on the modulator assembly. Press the modulator assembly into place. Tighten the four captive screws (5) and washers (6).

Note

Before reassembling cover (1), the transmitter must be adjusted and tested as described in the following paragraphs and in Section III.

Replace the cover (1). Insert six screws (3) in sides and six screws (2) in bottom. Tighten screws.

Caution

Be sure to replace all attaching screws. They are necessary for proper heat transfer.

Lubrication. The T-25A should be lubricated during reassembly as directed in the reassembly instructions. In addition, see Figure 2-7 for lubrication instructions required after reassembly.

Note
Ball bearings are sealed and lubricated for life.

Adjustments.

Fractional Megacycle Tuning Shaft. To adjust the fractional megacycle tuning shaft, proceed as follows:

Step 1. Index fractional megacycle crystal dial into .95-mc position. Adjust coils of L109 (140, Figure 2-4) so that slugs on bracket assembly (131) are inserted equally to a depth of one coil turn.

Step 2. Loosen setscrew (171), and adjust plate assembly (170) until slugs are inserted equally in coils of L115 (176) to a depth of one coil turn. Tighten and seal setscrew with red Glyptal enamel.

Megacycle Tuning Shaft. To adjust megacycle tuning shaft, proceed as follows:

Step 1. Index transmitter megacycle crystal dial into 135-mc position. Loosen two setscrews (75, Figure 2-4) in hub of cam (74) and rotate cam until hole in larger cam lobe is over shaft of capacitor (110).

Step 2. If necessary, apply Loctite Sealant to setscrews. Tighten setscrews. Check for at least 0.010-inch clearance between large cam lobe and plane of chassis mounting feet.

Tuner Assembly.

Note
Tuner assembly adjustments must be made with gearing assembly in place.

Step 1. To adjust latching relay position: Rotate drive cam to maximum-throw position (see Figure 2-8). Adjust relay mounting screws and relay locking setscrews in mounting posts so that with relay unenergized, the latch overlaps the latching pin by at least 0.020 inch and clears the pin by at least 0.015 inch; and with relay energized, the latch disengages the latching pin with at least 0.015-inch clearance on back stroke.

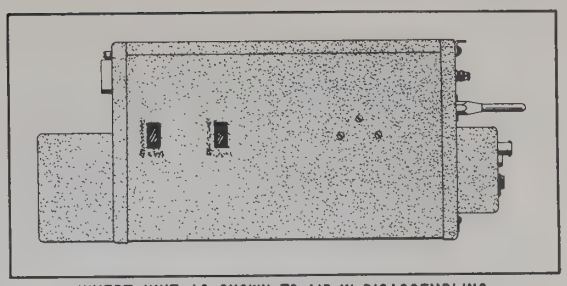
Step 2. To adjust driving stroke: Loosen drive-pawl pivot screw. With relay energized, manually adjust drive pawl position in slotted end of pawl-drive lever so that, near maximum cam throw, indexing pin drops into slot in index plate in all positions; and in minimum cam throw, drive pawl retracts sufficiently to engage following ratchet tooth in all positions.

Step 3. To check backlash in the megacycle tuning linkage in the 135-mc position: Rotate dial against reverse-locking pawl with relay energized. Drive pawl must retract sufficiently to engage following ratchet tooth. If not, adjust drive-pawl pivot screw.

When indexing plates are indexed in any position, edges of contact springs must not overlap top and bottom switch plate segments in tuners. After completion of adjustments, seal relay locking setscrews with red Glyptal enamel.

KEY TO FIGURE 2-1.

1. Cover
2. Screw
3. Screw
4. Modulator Assembly
5. Screw
6. Washer
7. Box Assembly
8. Screw
9. Emblem
10. Nut
11. Washer
12. Box
13. Front Plate Assembly
14. Screw
15. Screw
16. Screw
17. Lockwasher
18. Terminal
19. Bracket Assembly
20. Screw
21. Screw
22. Capacitor
23. Semiconductor Device
24. Relay
25. Nut
26. Terminal
27. Lockwasher
28. Insulator
29. Screw
30. Washer
31. Insulator
32. Screw
33. Washer
34. Terminal
35. Screw
36. Washer
37. Terminal
38. Screw
39. Lockwasher
40. Connector
41. Screw
42. Stud
43. Washer
44. Gearing Assembly
45. Screw
46. Washer
47. Bracket
48. Screw
49. Motor
50. Screw
51. Spring
52. Gearing Subassembly
53. Clip
54. Screw
55. Nut
56. Lockwasher
57. Connector
58. Transformer
59. Screw
60. Screw
61. Lockwasher
62. Terminal
63. Plate
64. Screw
65. Screw
66. Clip
67. Lockwasher
68. Relay
69. Screw
70. Connector
71. Connector
72. Transmitter Subassembly



INVERT UNIT AS SHOWN TO AID IN DISASSEMBLING.

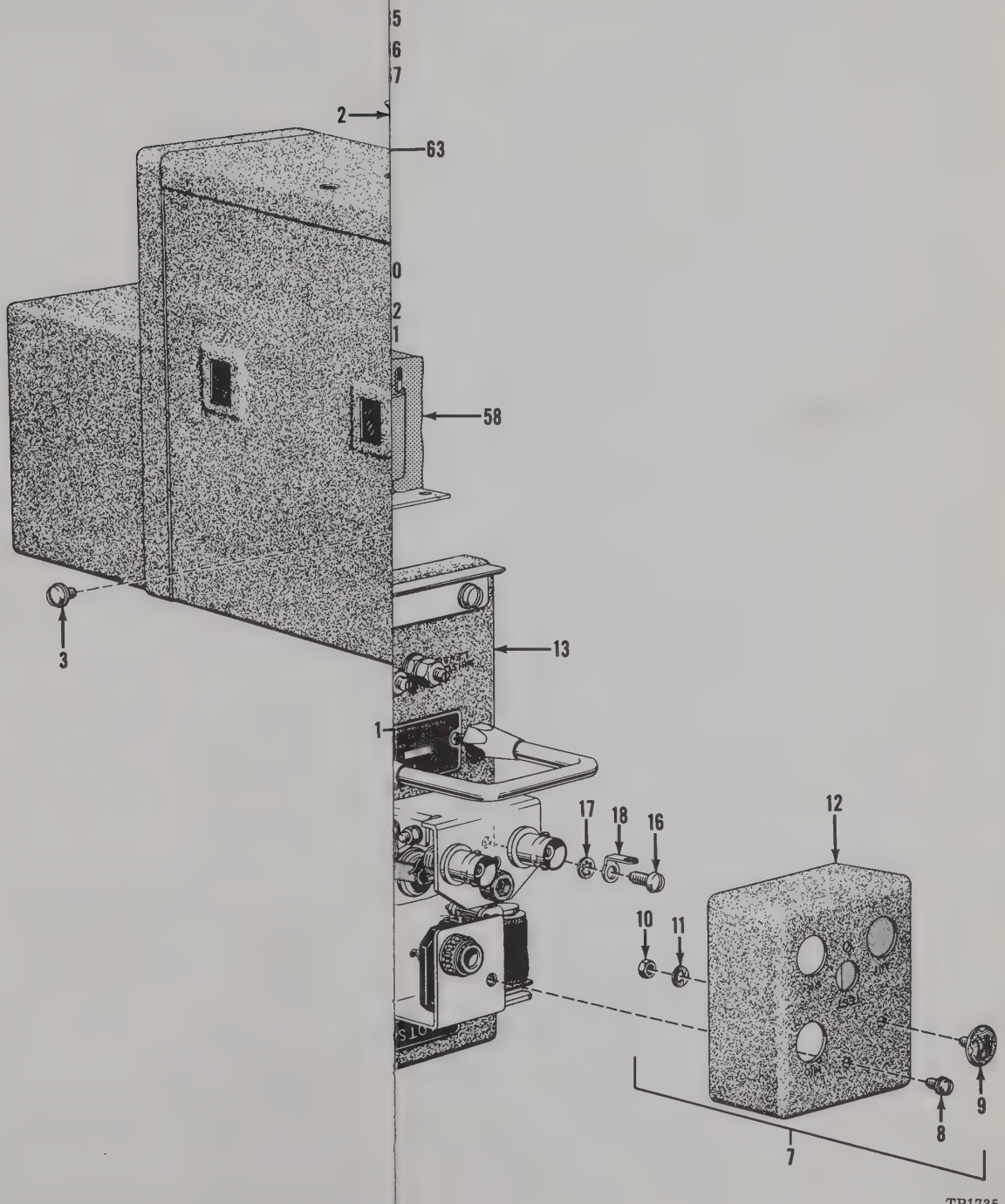


Figure 2-1. T-25A Transmitter Assembly

Lubrication. The T-25A should be lubricated during reassembly as directed in the reassembly instructions. In addition, see Figure 2-7 for lubrication instructions required after reassembly.

Note
Ball bearings are sealed and lubricated for life.

Adjustments.

Fractional Megacycle Tuning Shaft. To adjust the fractional megacycle tuning shaft, proceed as follows:

Step 1. Index fractional megacycle crystal dial into .95-mc position. Adjust coils of L109 (140, Figure 2-4) so that slugs on bracket assembly (131) are inserted equally to a depth of one coil turn.

Step 2. Loosen setscrew (171), and adjust plate assembly (170) until slugs are inserted equally in coils of L115 (176) to a depth of one coil turn. Tighten and seal setscrew with red Glyptal enamel.

Megacycle Tuning Shaft. To adjust megacycle tuning shaft, proceed as follows:

Step 1. Index transmitter megacycle crystal dial into 135-mc position. Loosen two setscrews (75, Figure 2-4) in hub of cam (74) and rotate cam until hole in larger cam lobe is over shaft of capacitor (110).

Step 2. If necessary, apply Loctite Sealant to setscrews. Tighten setscrews. Check for at least 0.010-inch clearance between large cam lobe and plane of chassis mounting feet.

Tuner Assembly.

Note
Tuner assembly adjustments must be made with gearing assembly in place.

Step 1. To adjust latching relay position: Rotate drive cam to maximum-throw position (see Figure 2-8). Adjust relay mounting screws and relay locking setscrews in mounting posts so that with relay unenergized, the latch overlaps the latching pin by at least 0.020 inch and clears the pin by at least 0.015 inch; and with relay energized, the latch disengages the latching pin with at least 0.015-inch clearance on back stroke.

Step 2. To adjust driving stroke: Loosen drive-pawl pivot screw. With relay energized, manually adjust drive pawl position in slotted end of pawl-drive lever so that, near maximum cam throw, indexing pin drops into slot in index plate in all positions; and in minimum cam throw, drive pawl retracts sufficiently to engage following ratchet tooth in all positions.

Step 3. To check backlash in the megacycle tuning linkage in the 135-mc position: Rotate dial against reverse-locking pawl with relay energized. Drive pawl must retract sufficiently to engage following ratchet tooth. If not, adjust drive-pawl pivot screw.

When indexing plates are indexed in any position, edges of contact springs must not overlap top and bottom switch plate segments in tuners. After completion of adjustments, seal relay locking setscrews with red Glyptal enamel.

KEY TO FIGURE 2-1.

1. Cover
2. Screw
3. Screw
4. Modulator Assembly
5. Screw
6. Washer
7. Box Assembly
8. Screw
9. Emblem
10. Nut
11. Washer
12. Box
13. Front Plate Assembly
14. Screw
15. Screw
16. Screw
17. Lockwasher
18. Terminal
19. Bracket Assembly
20. Screw
21. Screw
22. Capacitor
23. Semiconductor Device
24. Relay
25. Nut
26. Terminal
27. Lockwasher
28. Insulator
29. Screw
30. Washer
31. Insulator
32. Screw
33. Washer
34. Terminal
35. Screw
36. Washer
37. Terminal
38. Screw
39. Lockwasher
40. Connector
41. Screw
42. Stud
43. Washer
44. Gearing Assembly
45. Screw
46. Washer
47. Bracket
48. Screw
49. Motor
50. Screw
51. Spring
52. Gearing Subassembly
53. Clip
54. Screw
55. Nut
56. Lockwasher
57. Connector
58. Transformer
59. Screw
60. Screw
61. Lockwasher
62. Terminal
63. Plate
64. Screw
65. Screw
66. Clip
67. Lockwasher
68. Relay
69. Screw
70. Connector
71. Connector
72. Transmitter Subassembly

INVERT UNIT AS SHOWN TO AID IN DISASSEMBLING.

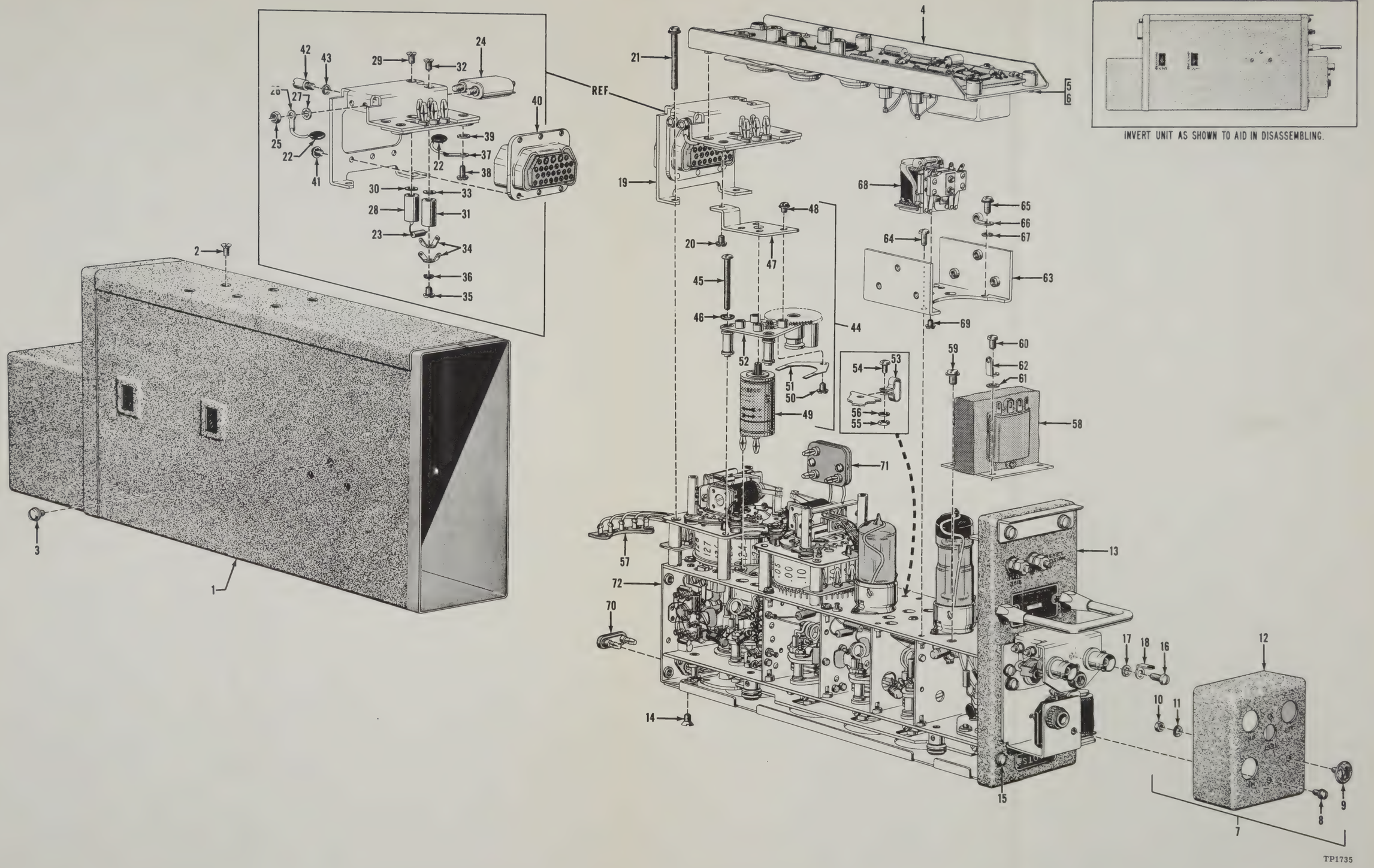
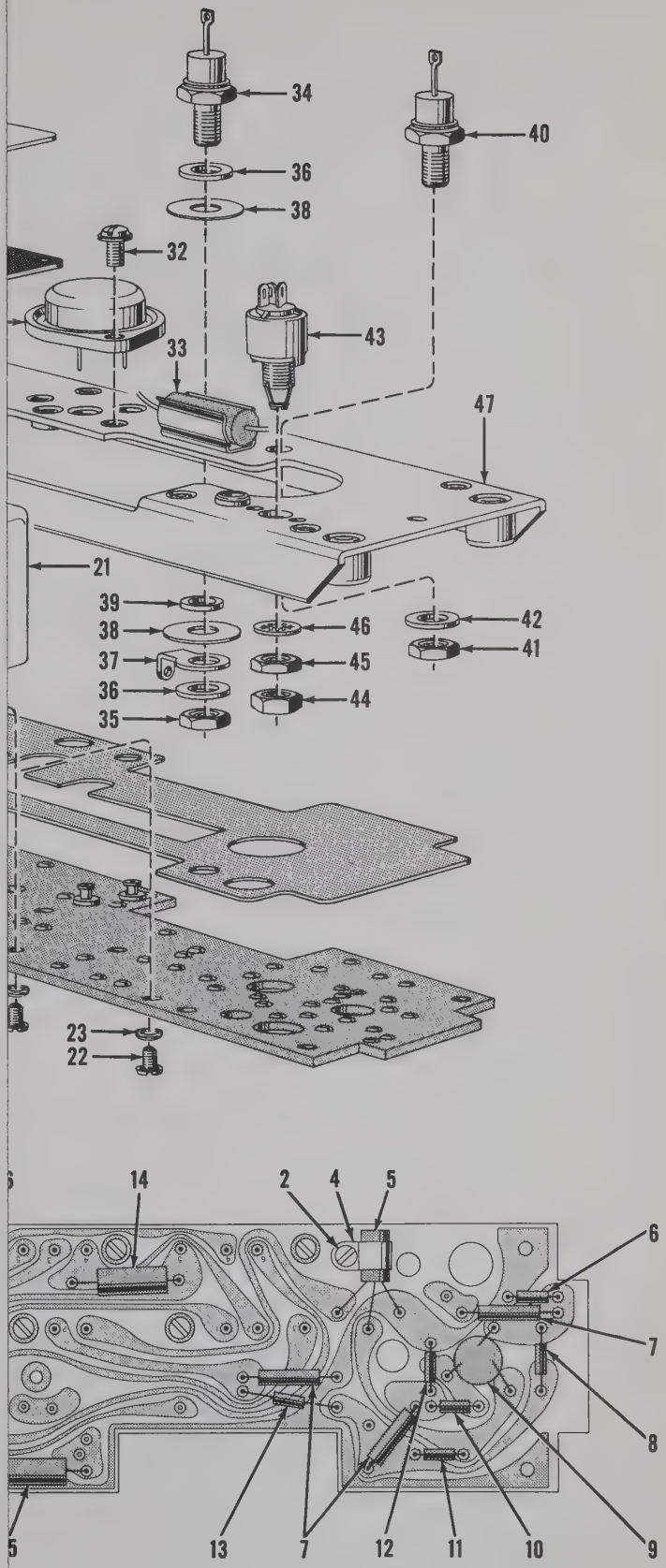


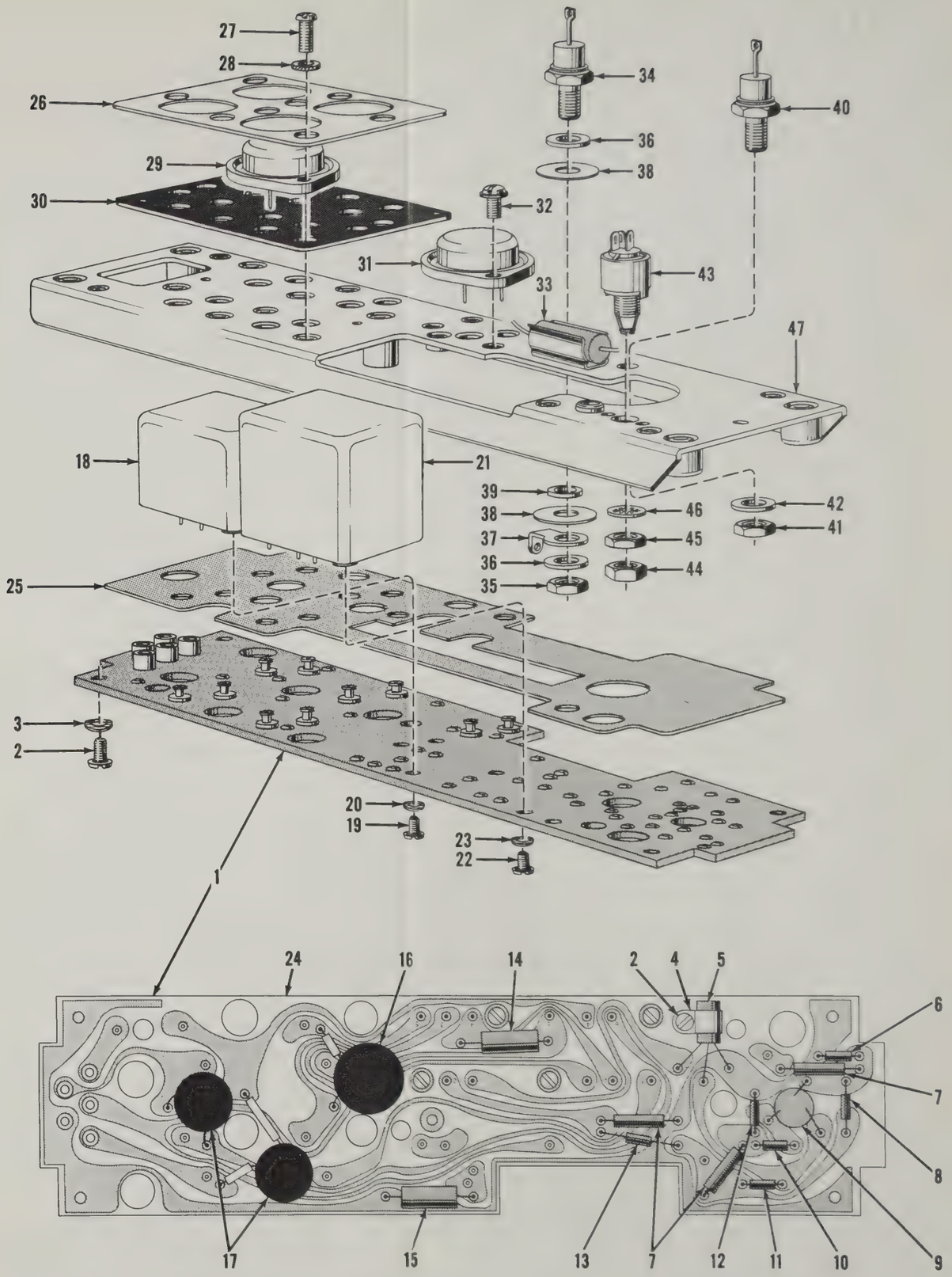
Figure 2-1. T-25A Transmitter Assembly



TP1737

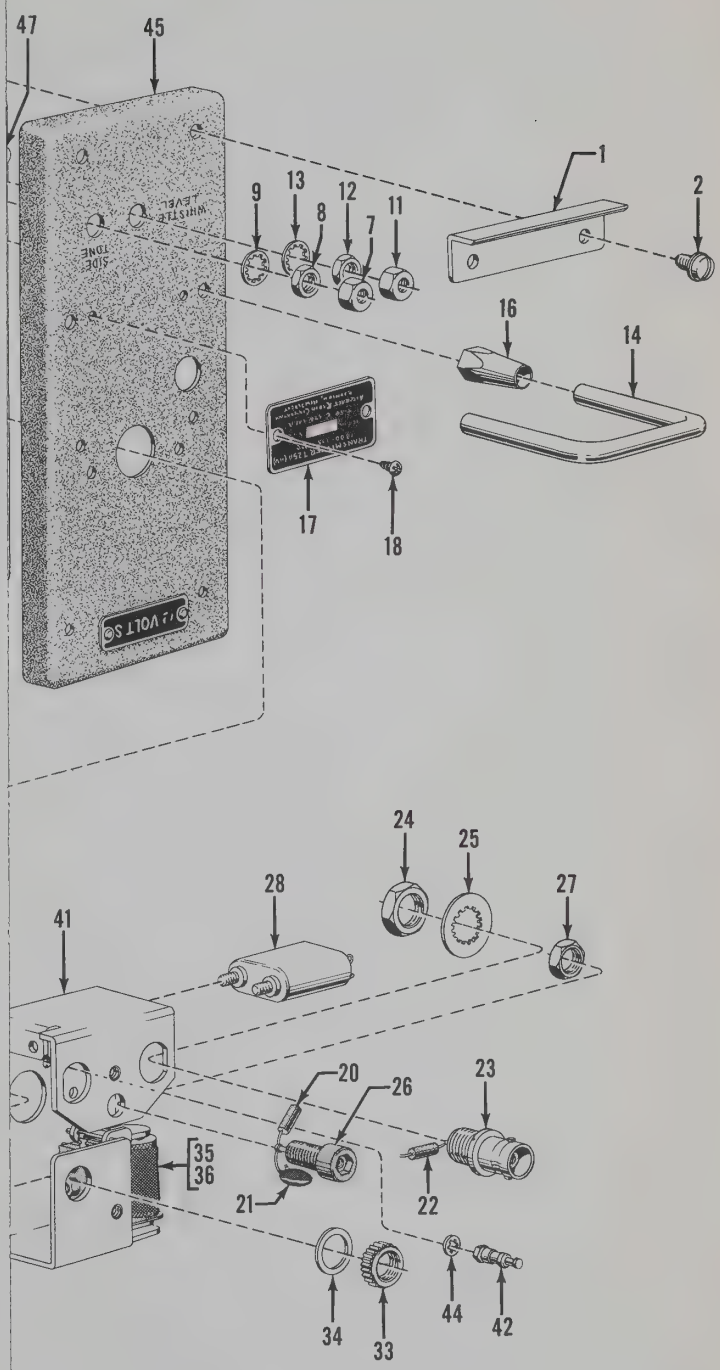
Figure 2-2. Modulator Assembly

1. Printed-circuit Assembly
2. Screw
3. Washer
4. Clip
5. Transistor
6. Resistor
7. Capacitor
8. Resistor
9. Transistor
10. Resistor
11. Resistor
12. Resistor
13. Resistor
14. Resistor
15. Resistor
16. Capacitor
17. Capacitor
18. Transformer
19. Screw
20. Washer
21. Transformer
22. Screw
23. Washer
24. Board
25. Plate
26. Plate
27. Screw
28. Bushing
29. Transistor
30. Plate
31. Transistor
32. Screw
33. Resistor
34. Semiconductor Device
35. Nut
36. Washer
37. Terminal
38. Washer
39. Washer
40. Semiconductor Device
41. Nut
42. Washer
43. Resistor
44. Nut
45. Nut
46. Lockwasher
47. Chassis



TP1737

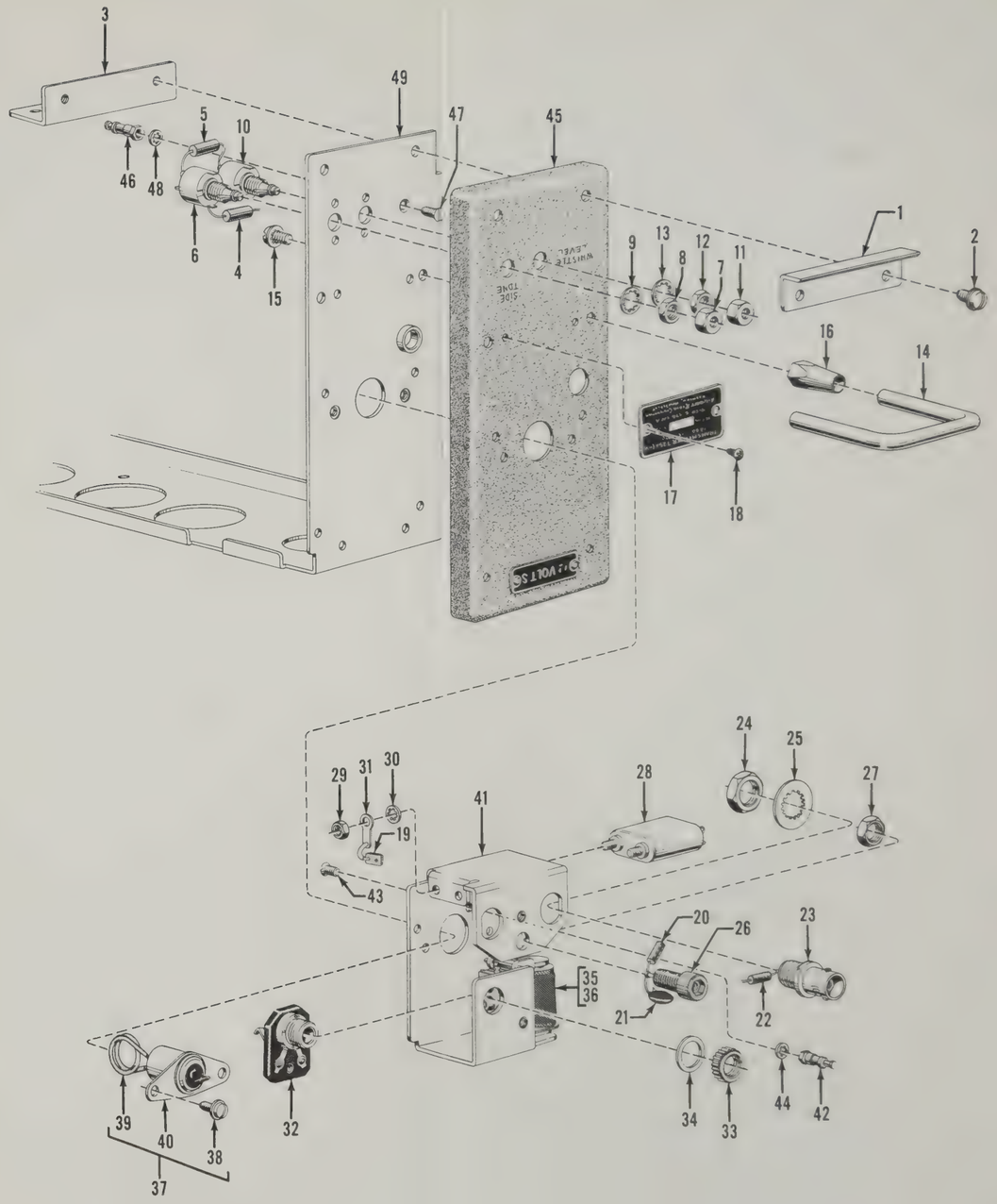
Figure 2-2. Modulator Assembly



TP1739

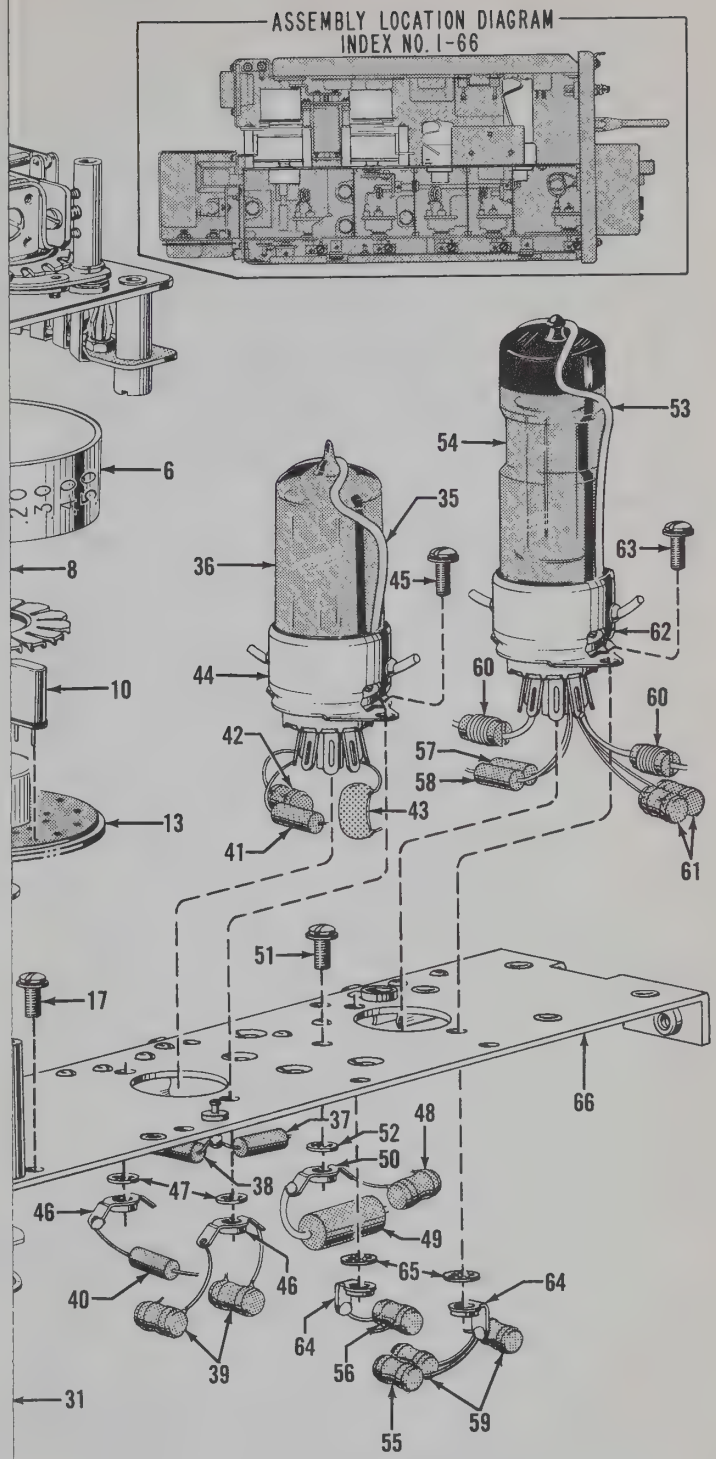
Figure 2-3. Front Plate Assembly

1. Bracket
2. Screw
3. Bracket
4. Resistor
5. Resistor
6. Resistor
7. Nut
8. Nut
9. Lockwasher
10. Resistor
11. Nut
12. Nut
13. Lockwasher
14. Handle
15. Screw
16. Collar
17. Plate
18. Screw
19. Capacitor
20. Resistor
21. Capacitor
22. Semiconductor Device
23. Connector
24. Nut
25. Lockwasher
26. Jack
27. Nut
28. Relay
29. Nut
30. Lockwasher
31. Terminal
32. Jack
33. Nut
34. Washer
35. Relay
36. Screw
37. Coupling Coil Assembly
38. Screw
39. Coil
40. Filter
41. Bracket
42. Insulator
43. Screw
44. Lockwasher
45. Plate
46. Insulator
47. Screw
48. Lockwasher
49. Frame Assembly



TP1739

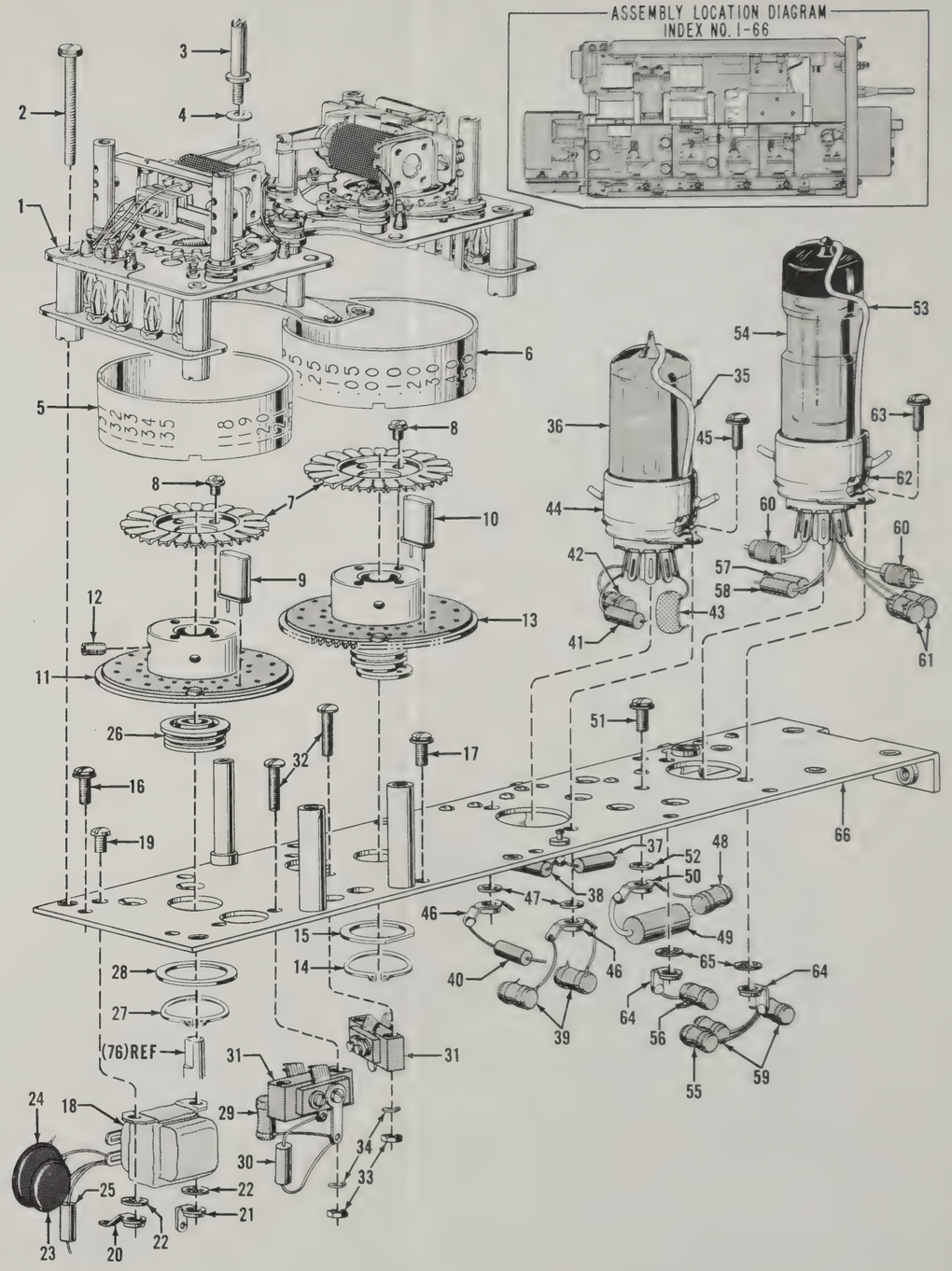
Figure 2-3. Front Plate Assembly



TP1741

Figure 2-4. Transmitter Subassembly (Sheet 1 of 2)

1. Tuner Assembly
2. Screw
3. Post
4. Washer
5. Dial
6. Dial
7. Spring
8. Screw
9. Crystal Unit
10. Crystal Unit
11. Plate Subassembly
12. Setscrew
13. Gear-cam Assembly
14. Ring
15. Washer
16. Screw
17. Screw
18. Transformer
19. Screw
20. Terminal Assembly
21. Terminal Assembly
22. Lockwasher
23. Capacitor
24. Capacitor
25. Resistor
26. Bearing
27. Ring
28. Washer
29. Capacitor
30. Choke
31. Terminal Block
32. Screw
33. Nut
34. Washer
35. Clamp
36. Electron Tube
37. Resistor
38. Coil
39. Capacitor
40. Resistor
41. Resistor
42. Capacitor
43. Capacitor
44. Socket
45. Screw
46. Terminal Assembly
47. Lockwasher
48. Capacitor
49. Resistor
50. Terminal Assembly
51. Screw
52. Lockwasher
53. Clamp
54. Electron Tube
55. Capacitor
56. Capacitor
57. Resistor
58. Resistor
59. Capacitor
60. Coil
61. Capacitor
62. Socket
63. Screw
64. Terminal Assembly
65. Lockwasher
66. Plate



TP1741

Figure 2-4. Transmitter Subassembly (Sheet 1 of 2)

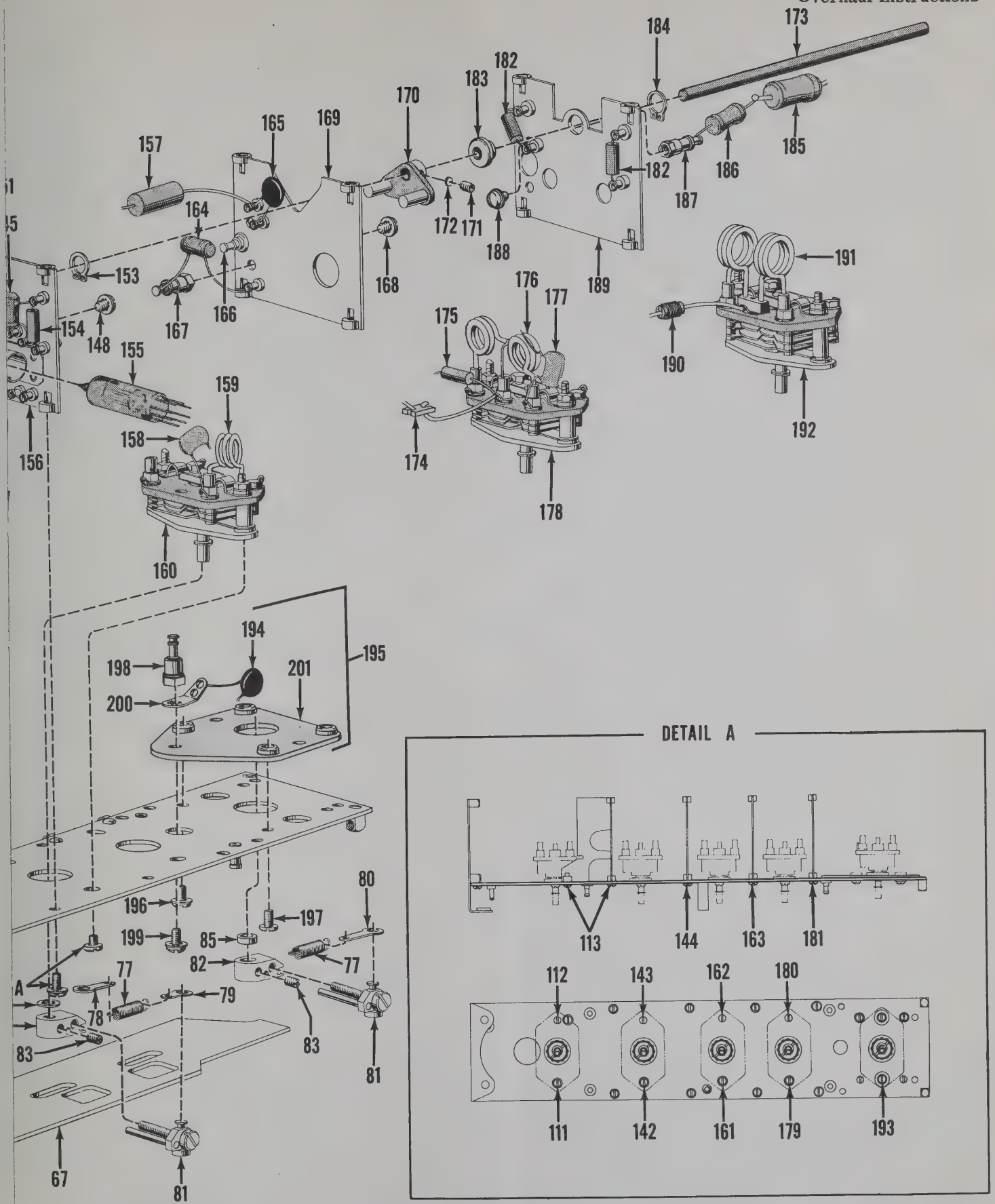


Figure 2-4. Transmitter Subassembly (Sheet 2 of 2)

67. Plate Assembly
68. Terminal
69. Screw
70. Bearing
71. Setscrew
72. Washer
73. Spring
74. Cam
75. Setscrew
76. Shaft
77. Spring
78. Terminal Lug
79. Terminal Lug
80. Terminal Lug
81. Arm Assembly
82. Block
83. Setscrew
84. Washer
85. Spacer
86. Lever Subassembly
87. Ring
88. Screw
89. Screw
90. Lockwasher
91. Capacitor
92. Capacitor
93. Screw
94. Insulator
95. Screw
96. Resistor
97. Resistor
98. Resistor
99. Capacitor
100. Resistor
101. Resistor
102. Capacitor
103. Electron Tube
104. Plate
105. Coil
106. Coil
107. Capacitor
108. Capacitor
109. Capacitor
110. Capacitor
111. Screw
112. Screw
113. Screw
114. Resistor
115. Capacitor
116. Capacitor
117. Choke
118. Resistor
119. Choke
120. Resistor
121. Resistor
122. Capacitor
123. Capacitor
124. Electron Tube
125. Electron Tube
126. Choke
127. Plate
128. Bearing
129. Ring
130. Washer
131. Bracket Assembly
132. Setscrew
133. Disc
134. Spring
135. Resistor
136. Capacitor
137. Capacitor
138. Capacitor
139. Resistor
140. Coil
141. Capacitor
142. Screw
143. Screw
144. Screw
145. Capacitor
146. Resistor
147. Insulator
148. Screw
149. Capacitor
150. Choke
151. Coil
152. Bearing
153. Ring
154. Resistor
155. Electron Tube
156. Plate
157. Resistor
158. Capacitor
159. Coil
160. Capacitor
161. Screw
162. Screw
163. Screw
164. Capacitor
165. Capacitor
166. Capacitor
167. Insulator
168. Screw
169. Plate
170. Plate Assembly
171. Setscrew
172. Disc
173. Shaft
174. Capacitor
175. Choke
176. Coil
177. Capacitor
178. Capacitor
179. Screw
180. Screw
181. Screw
182. Resistor
183. Bearing
184. Ring
185. Resistor
186. Resistor
187. Insulator
188. Screw
189. Plate
190. Choke
191. Coil
192. Capacitor
193. Screw
194. Capacitor
195. Plate Assembly
196. Screw
197. Screw
198. Insulator
199. Screw
200. Terminal
201. Plate
202. Plate

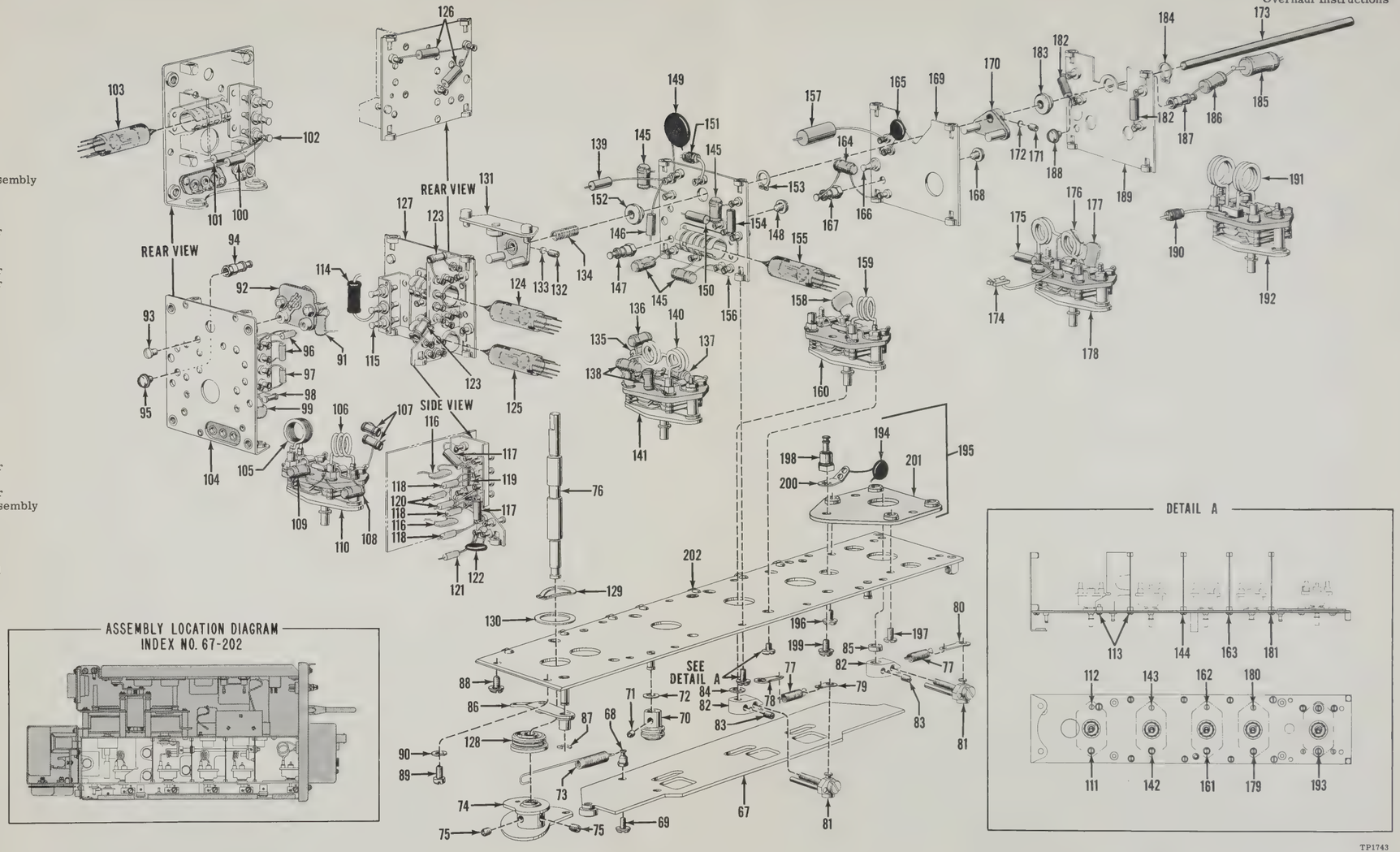


Figure 2-4. Transmitter Subassembly (Sheet 2 of 2)

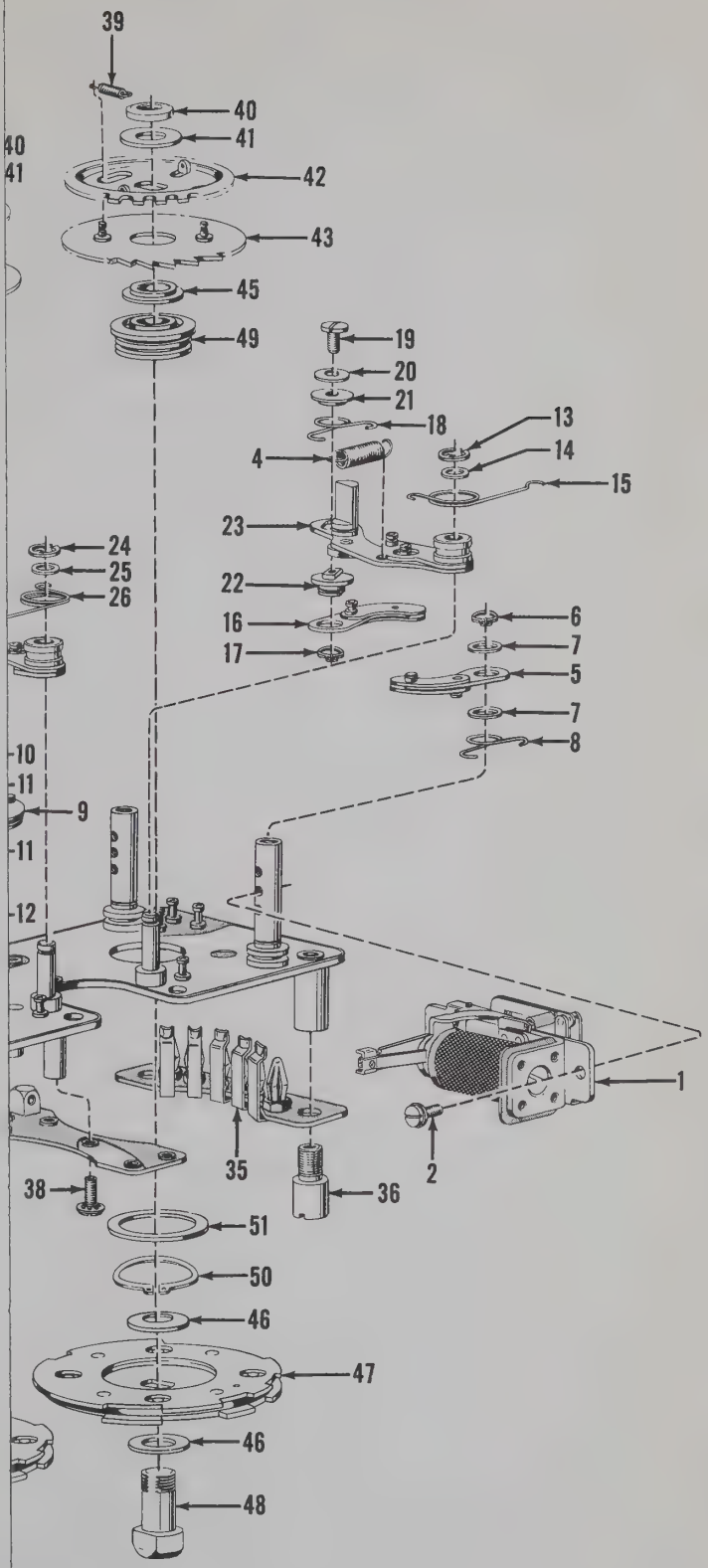


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Figure 2-5. Tuner Assembly

1. Relay
2. Screw
3. Setscrew
4. Spring
5. Pawl
6. Ring
7. Washer
8. Spring
9. Pawl
10. Ring
11. Washer
12. Spring
13. Ring
14. Washer
15. Spring
16. Pawl
17. Ring
18. Spring
19. Screw
20. Washer
21. Washer
22. Post
23. Lever
24. Ring
25. Washer
26. Spring
27. Pawl
28. Ring
29. Spring
30. Screw
31. Washer
32. Washer
33. Post
34. Lever
35. Plate
36. Post
37. Plate
38. Screw
39. Spring
40. Nut
41. Washer
42. Plate
43. Ratchet Assembly
44. Ratchet Assembly
45. Bushing
46. Washer
47. Plate
48. Stud
49. Bearing
50. Ring
51. Washer
52. Panel

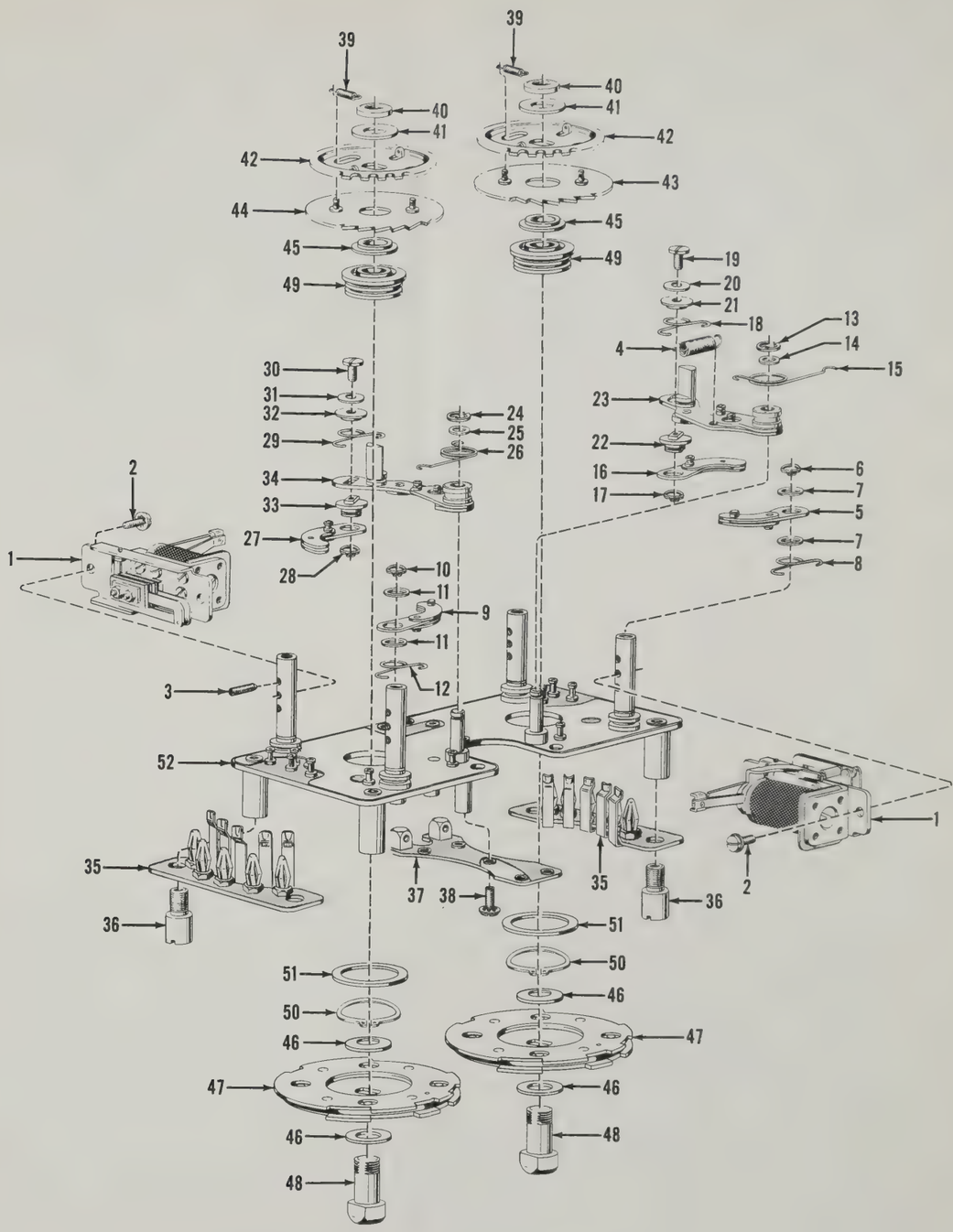

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Figure 2-5. Tuner Assembly

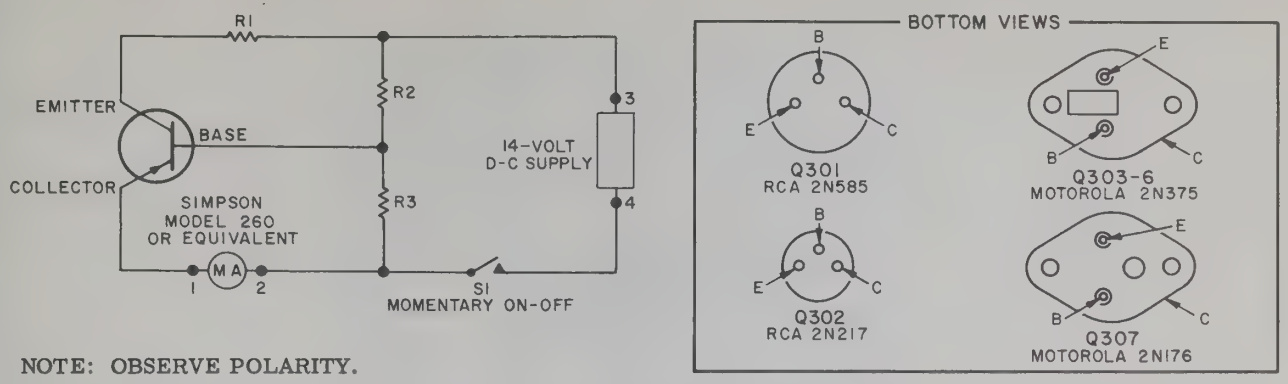

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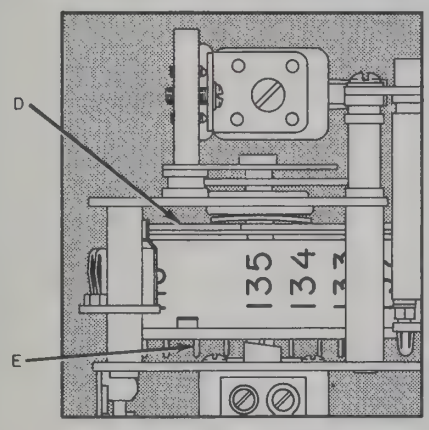
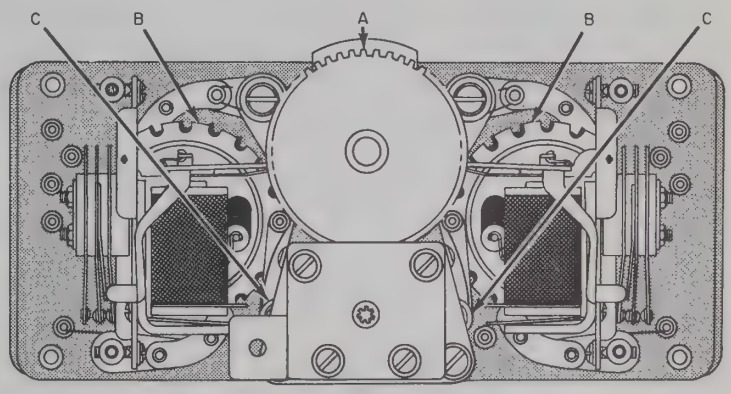
Figure 2-6. Transistor Test Circuit



TYPICAL DRUM ASSEMBLY
SIDE VIEW



TUNER ASSEMBLY
TOP VIEW

Point of Lubrication	Part to be Lubricated	Lubrication Period (hours)	Lubricant	Application
A	Drive Motor Spur Gears	500	Aeroshell No. 7 Grease	Apply small amount to several teeth on both gears.
B	Indexing Plate Notches and Ratchet Teeth	500	Aeroshell No. 7 Grease	Apply small amount to several notches and teeth of each tuner assembly.
C	Lever Arm Post Bearing	500	Aeroshell No. 7 Grease	Apply small amount.
D	Switch Plate Contact Surface	500	Dow-Corning 510 Silicone Fluid	Apply small amount to several points on the switch plate contact surface of each tuner assembly with artist's brush.
E	Crystal Pins	500	Dow-Corning 510 Silicone Fluid	Apply small amount to several crystal pins of each tuner assembly with artist's brush.

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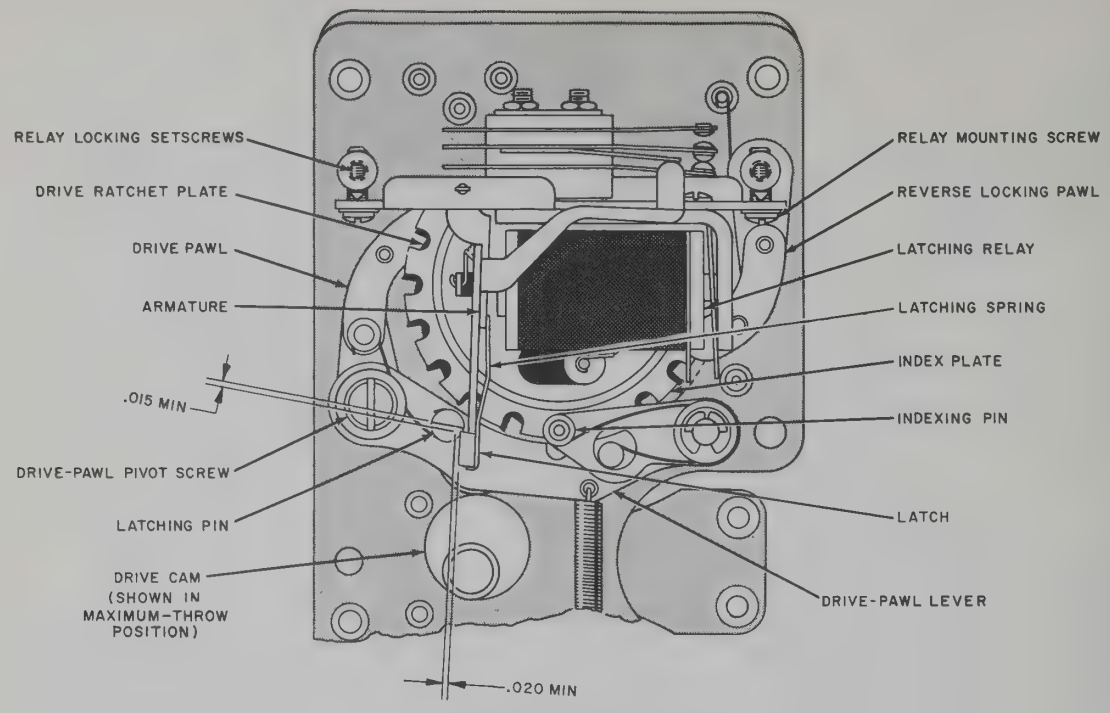
Figure 2-7. T-25A Transmitter, Lubrication Data



NOTE: DIMENSIONS ARE IN INCHES.

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Figure 2-8. Tuner Assembly, Adjustment Points and Limits

2-3. DV-12A DYNAVERTER.

Disassembly.

Note

Disassemble the DV-12A only to the extent required for necessary repair and replacement of parts.

Step 1. Remove two screws (2, Figure 2-9) and washers (3) to take off plate (1).

Step 2. Take out two screws (4) and washers (4A) to remove the component board subassembly.

Step 3. If necessary, remove semiconductor devices (5), resistor (6), capacitors (7), resistors (8), and resistor (9).

Step 4. Pry capacitor (10) from clip (11). Remove screw (12) to take clip from plate assembly (13).

Step 5. Remove resistor (14) from terminals of capacitor (15). Remove two screws (16) to take out capacitor.

Step 6. On 28-volt models, remove two screws (18) to take out reactor (17).

Step 7. If it is necessary to remove cable tie (19), cut it off and discard it, as it will not be reused.

Step 8. Remove three screws (21) from rear and bottom of bracket assembly (30) to take out transformer (20). Remove screw (23) to remove terminal (22) from transformer.

Step 9. Remove nut (25) and washer (26) to take out transistor (24). Remove nut (28) and washer (29) to take transistor (27) from bracket assembly (30).

Cleaning. Clean metallic parts, such as hardware and the bracket assembly, with a lintless cloth moistened with Varsol, or an equivalent dry-cleaning solvent. Varsol is a petroleum naphtha of the Stoddard solvent class, and may be purchased from the Esso Standard Oil Co. Solvent, dry cleaning, per Federal Specification P-S-661, may also be used. After cleaning with Varsol, dry parts with clean, oil-free, compressed air at 10 - 12 psi. Clean the nonmetallic items with compressed air and a dry, lintless cloth.

Inspection and Test. All parts should be inspected for signs of corrosion, overheating, stripped threads, or cracked insulation. The electrical parts may be tested in a conventional manner. To test either transistor, connect it in the circuit shown in Figure 2-6. Connect appropriate resistance value for R1, R2, and R3 as listed in Table 2-4. Connect d-c supply and meter as listed in Table 2-4. Press switch S1 and read meter. Normal readings (approximately mid scale) are listed in Table 2-4. If meter reads full scale, transistor is shorted. If meter reads zero or very low, transistor is open.

1. Plate
2. Screw
3. Washer
4. Screw
4A. Washer
5. Semiconductor Device
6. Resistor
7. Capacitor
8. Resistor
9. Resistor
10. Capacitor
11. Clip
12. Screw
13. Plate Assembly
14. Resistor
15. Capacitor
16. Screw
17. Reactor
18. Screw
19. Cable Tie
20. Transformer
21. Screw
22. Terminal
23. Screw
24. Transistor
25. Nut
26. Washer
27. Transistor
28. Nut
29. Washer
30. Capacitor
31. Terminal
32. Screw
33. Bracket Assembly

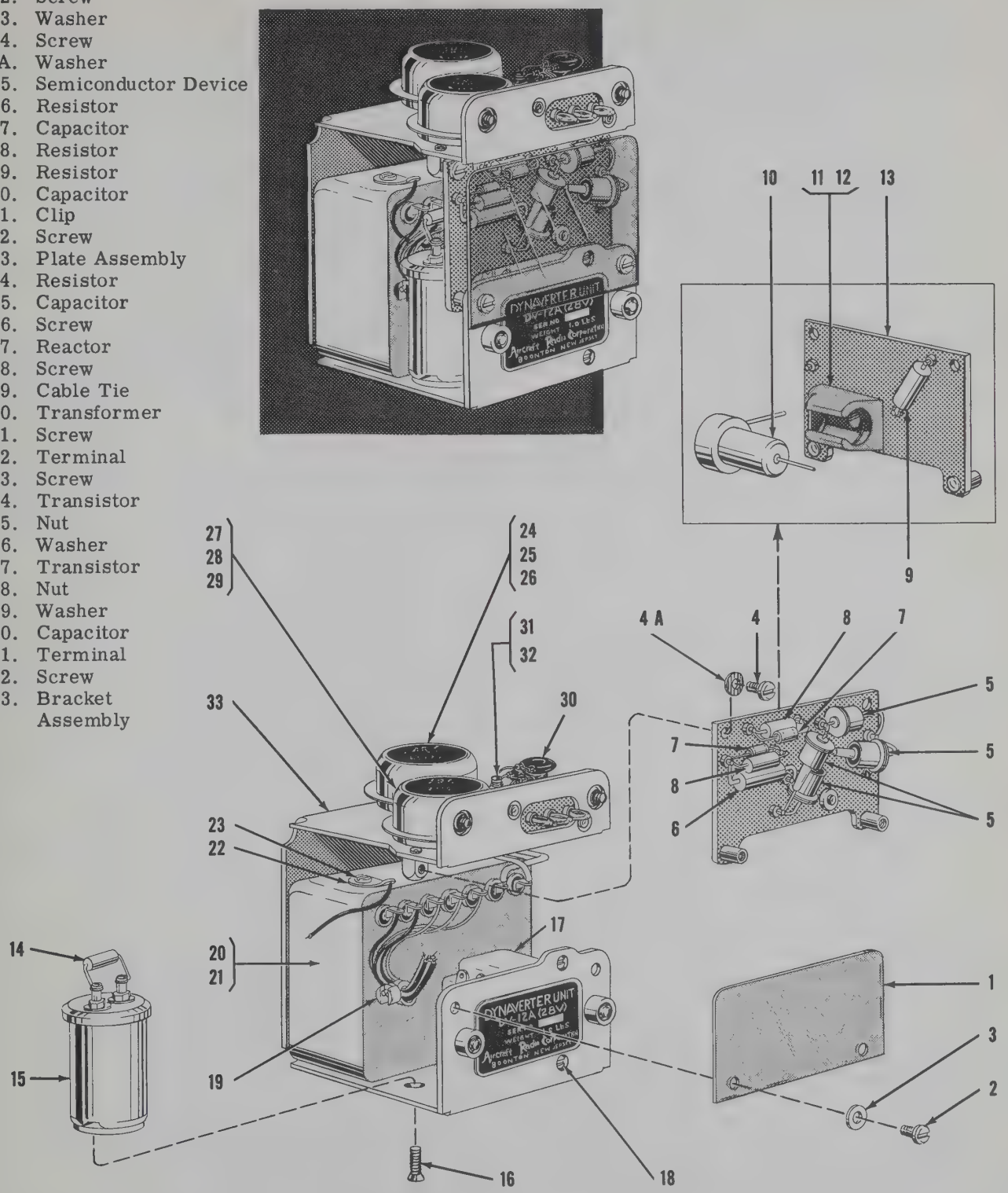

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Figure 2-9. DV-12A Dynaverter Assembly

TABLE 2-4. DYNAVERTER TRANSISTOR TEST DATA

Transistor		Resistance (ohms)			D-c Supply		Meter			
Ref Desig	ARC Pt No.	R1	R2	R3	Connect + to	Connect - to	Scale (ma)	Connect + to	Connect - to	Reading (ma)
Q401 (14V)	21153	10	820	2200	3	4	500	1	2	250
Q401 (28V)	20454	10	820	2200	3	4	500	1	2	250
Q402 (14V)	21153	10	820	2200	3	4	500	1	2	250
Q402 (28V)	20454	10	820	2200	3	4	500	1	2	250

Reassembly. For a wiring diagram of the DV-12A, refer to Figure 4-13. To reassemble the Dynaverter, proceed as follows:

Step 1. Apply a thin coating of Dow-Corning 200 Silicone Fluid on top of bracket assembly (30). Place transistor (27, Figure 2-9) in position on bracket assembly. Align transistor leads in center of bracket assembly holes, place washer (29) over mounting stud, and secure with nut (28). Seal nut with black Glyptal enamel.

Step 2. Repeat Step 1, using transistor (24), washer (26), and nut (25).

Step 3. Place terminal (22) on transformer (20) and point it toward transformer terminals. Secure with screw (23). Place transformer in position inside bracket assembly (30). Fasten transformer with three screws (21). Seal screw heads with black Glyptal enamel.

Step 4. On 28-volt models, place reactor (17) in bracket assembly (30) with terminals away from outside of bracket assembly. Secure with screws (18). Seal screws with black Glyptal enamel.

Step 5. Connect resistor (14) across terminals of capacitor (15). Place capacitor in position with resistor toward transformer and secure with screws (16). Seal screws with black Glyptal enamel.

Step 6. If removed, place clip (11) on plate assembly (13) and secure with screw (12). Replace capacitor (10) and resistor (9). Connect wires between plate assembly, capacitor (15), and transformer (20).

Step 7. If removed, attach a new cable tie (19) around eight wires connected to plate assembly (13). Loop the tie around the wires over capacitor (15), and insert the free end through the tie hole. Pull the loop tight, then twist the free end 120° in either direction to lock it. Cut off the portion of the free end protruding through the tie hole.

Step 8. If removed, replace resistors (8), capacitors (7), resistor (6), and semiconductor devices (5).

Step 9. Place one washer (4A) on each screw (4) with convex side of washer toward screw head. Place component board subassembly in position and secure with screws and washers. Seal screws with black Glyptal enamel.

Step 10. Place one washer (3) on each screw (2). Place plate (1) in position and secure with screws.

2-4. C-82A CONTROL UNIT.

Disassembly.

> Note
> Disassemble the C-82A only to the extent required for necessary repair and replacement of parts.

Step 1. Release cover assembly (1, Figure 2-10) by turning two captive Dzus fasteners one-quarter turn counterclockwise.

Step 2. Remove four screws (3) which hold plate assembly (2) to panel assembly (28). Remove nut (5) to remove connector (4). If necessary, take out two screws (7) to remove plate (6).

Step 3. Unscrew and remove two lamp housing assemblies (9) from light assemblies (8).

Step 4. With the thin edge of a knife blade or with fingernails of thumb and middle finger inserted between the flange bases of lamps (13) and threaded bushings, withdraw lamps.

Step 5. Slide grommets (10) from barrels of lamp housing and filter assemblies (12). With a sharp-pointed tool, remove springs (11).

Step 6. Loosen four setscrews (15) with a No. 6 multiple-spline wrench and remove knobs (14).

Step 7. Remove two screws (17) and washers (18), and slide panel (16) off over ends of shafts.

Step 8. Remove two nuts (20) and lockwashers (21) to take out retainers (19).

Step 9. Remove nut (23) to free switch (22). Remove washer (24) and nut (25).

Step 10. Remove four screws (27) attaching switch assembly (26) to panel assembly (28).

> Caution
> Excessive soldering iron heat applied to terminals on printed-circuit plates of switch assembly will affect position and pressure of contact springs.

Cleaning. Clean metallic parts, such as hardware and plates, with a lintless cloth moistened with Varsol, or an equivalent dry-cleaning solvent. Varsol is a petroleum naphtha of the Stoddard solvent class, and may be purchased from the Esso Standard Oil Co. Solvent, dry-cleaning, per Federal Specification P-S-661, may also be used. After cleaning with Varsol, dry parts with clean, oil-free, compressed air at 10 - 12 psi.

Clean connector (4, Figure 2-10) by blowing out accumulated dust with compressed air and using a stiff bristle brush. Clean nonmetallic items and the exterior of switch assembly (26) with compressed air and a dry, lintless cloth.

Inspection and Test. Visually inspect all parts, using a jeweler's loupe if necessary, for wear, corrosion, stripped threads, cracked insulation, damaged finish, deformed contacts, or other defects. Inspect the printed-circuit plates and contact springs of switch assembly (26, Figure 2-10) for signs of abnormal wear or deformity. The switch assembly may be tested while the control unit is disassembled. There are 15 terminals in line on the megacycle switch board, S2-1A, located on the right side of the switch assembly when viewed from the rear. Terminal No. 1 is at the rear of the switch and has a yellow wire connected to it. Terminal No. 15 is at the front of the switch and has a blue wire with white tracer connected to it. The terminals are numbered consecutively from 1 to 15. The switch assembly terminals may be checked for proper connection and grounding with an ohmmeter set on the R x 1 scale. If desired, the panel (16, Figure 2-10) may be placed over the switch shafts, and knobs and setscrews (14 and 15) attached to aid in channel selection.

Refer to Table 2-5, which lists the terminals grounded or connected together for each switch position. Attach the ground lead of the ohmmeter to the switch assembly metal frame. Use the other lead to check for zero resistance to the terminals listed in Column A. Column B lists terminals which are connected to each other. Place one lead of the ohmmeter on the first numbered terminal and check for zero resistance to the other terminals listed. Column C lists another set of terminals that are connected together. Check for zero resistance between the terminals listed. Set the megacycle channel selector switch to each position from 118 to 135 mc and check for proper grounds and continuity.

There are 10 terminals in line on the fractional megacycle switch board, S201B, located on the left side of the switch assembly when viewed from the rear. Terminal No. 16 is at the front of the switch and has one red wire on it. Terminal No. 24 is at the rear of the switch and has two red wires on it. The terminals are numbered consecutively from 16 to 24. Terminal No. 25 is located directly under No. 23.

Table 2-5 lists the terminals grounded or connected together for the fractional megacycle switch positions. Attach the ground lead of the ohmmeter to the switch assembly metal frame. Use the other lead to check for zero resistance to the terminals listed in Column D. Column E lists terminals which are connected to each other. Place one lead of the ohmmeter on the first numbered terminal and check for zero resistance to the other terminals listed. Set the fractional megacycle channel selector switch to each position from .00 to .95 mc and check for proper grounds and continuity.

Lubrication. See Figure 2-11 for lubrication information.

Reassembly. For a wiring diagram of the control unit, refer to Figure 4-12. To reassemble the control unit, proceed as follows:

Step 1. Lubricate the switch assembly (26, Figure 2-10), using instructions given in Figure 2-11. Insert four screws (27) through holes in panel assembly (28) and slide it over switch assembly shafts. Tighten screws and seal them with black Glyptal enamel.

Step 2. Place nut (25) on switch (22). Place washer (24) on switch and insert it in panel assembly (28) with switch terminals pointed upward. Secure with nut (23).

Step 3. Insert retainers (19) and secure with lockwashers (21) and nuts (20).

Step 4. Place panel (16) in position. Place one washer (18) on each screw (17) with concave side toward the screw head. Insert screws in panel and tighten.

Step 5. Insert two setscrews (15) in each knob (14), and place knobs on switch assembly shafts with one setscrew over a flat on each shaft. Tighten setscrews and seal with black Glyptal enamel.

Step 6. Use tweezers or a small pair of long nose pliers to replace one spring (11) in slot in each lamp housing and filter assembly (12). Slide grommet (10), small end first, onto barrel of each housing.

Step 7. Insert one lamp (13) in each lamp housing, seating flange of lamp base firmly against threaded bushing. Replace lamp housing assemblies (9) in light assemblies (8) and screw in finger-tight.

Step 8. If removed, replace plate (6) and secure with two screws (7). Replace connector (4) and align its locating stud with notch in plate assembly (2). Secure with nut (5) and seal with black Glyptal enamel.

Step 9. Insert four screws (3) in plate assembly (2), and place plate assembly on mounting studs of panel assembly (28) so that connector (4) is farthest away from switch (22). Tighten setscrews.

Step 10. Replace cover (1) and turn two captive Dzus fasteners one-quarter turn clockwise to secure it.

TABLE 2-5. CHANNEL SELECTOR SWITCH CONNECTIONS

MC Channel	Grounded Terminals (Column A)	Connected Terminals (Column B)	Connected Terminals (Column C)	Fract MC Channel	Grounded Terminals (Column D)	Connected Terminals (Column E)
118	1 3 7 9 10 15	2 4 6 11 12 13 14	5 8	.00	16 18 24 25	17 19 20 21 22 23
119	2 5 6 8 10 14 15	1 3 4 9 11 12 13	7	.05	16 18 20 21 24 25	17 19 22 23
120	1 4 6 7 8 10 13 15	2 3 9 11 12 14	5	.10	16 17 23 24	18 19 20 21 22 25
121	3 4 5 7 8 10 12	1 2 6 9 11 13 14	15	.15	16 18 19 20 21 22 24 25	17 23
122	2 3 5 7 8 11	1 4 6 9 12 13 14	10 15	.20	19 22	16 17 18 20 21 23 24 25
123	1 2 5 7 9 14	3 4 6 11 12 13	8 10 15	.25	17 18 19 20 21 22 23 25	16 24
124	1 5 13 14 15	2 3 4 6 9 11 12	7 8 10	.30	20 21	16 17 18 19 22 23 24 25
125	6 10 12 13 14	1 2 3 4 9 11	5 7 8 15	.35	16 17 19 20 21 22 23 24	18 25
126	4 8 11 12 13 14	1 2 3 6 9	5 7 10 15	.40	18 25	16 17 19 20 21 22 23 24
127	3 7 9 11 12 13	1 2 4 6 14	5 8 10 15	.45	17 18 19 22 23 25	16 20 21 24
128	2 5 9 11 12 14	1 3 4 6 13	7 8 10 15	.50	16 24	17 18 19 20 21 22 23 25
129	1 6 9 11 13 15	2 3 4 12 14	5 7 8 10	.55	16 17 20 21 23 24	18 19 22 25
130	4 6 9 10 12 15	1 2 3 11 13 14	5 7 8	.60	17 23	16 18 19 20 21 22 24 25
131	3 4 6 8 10 11 14	1 2 9 12 13	5 7 15	.65	18 19 22 25	16 17 20 21 23 24
132	2 3 4 6 7 8 9 13 14	1 11 12	5 10 15	.70	17 19 22 23	16 18 20 21 24 25
133	1 2 3 4 5 7 12 13 15	6 9 11 14	8 10	.75	17 20 21 23	16 18 19 22 24 25
134	1 2 3 5 6 10 11 12	4 9 13 14	7 8 15	.80	19 20 21 22	16 17 18 23 24 25
135	1 2 4 8 9 11 15	3 6 12 13 14	5 7 10	.85	16 19 22 24	17 18 20 21 23 25
				.90	18 20 21 25	16 17 19 22 23 24
				.95	16 17 18 23 24 25	19 20 21 22

KEY TO FIGURE 2-10.

1. Cover Assembly
2. Plate Assembly
3. Screw
4. Connector
5. Nut
6. Plate
7. Screw
8. Light Assembly
9. Lamp Housing Assembly
10. Grommet
11. Spring
12. Lamp Housing and Filter Assembly
13. Lamp
14. Knob
15. Setscrew
16. Panel
17. Screw
18. Washer
19. Retainer
20. Nut
21. Washer
22. Switch
23. Nut
24. Washer
25. Nut
26. Switch Assembly
27. Screw
28. Panel Assembly

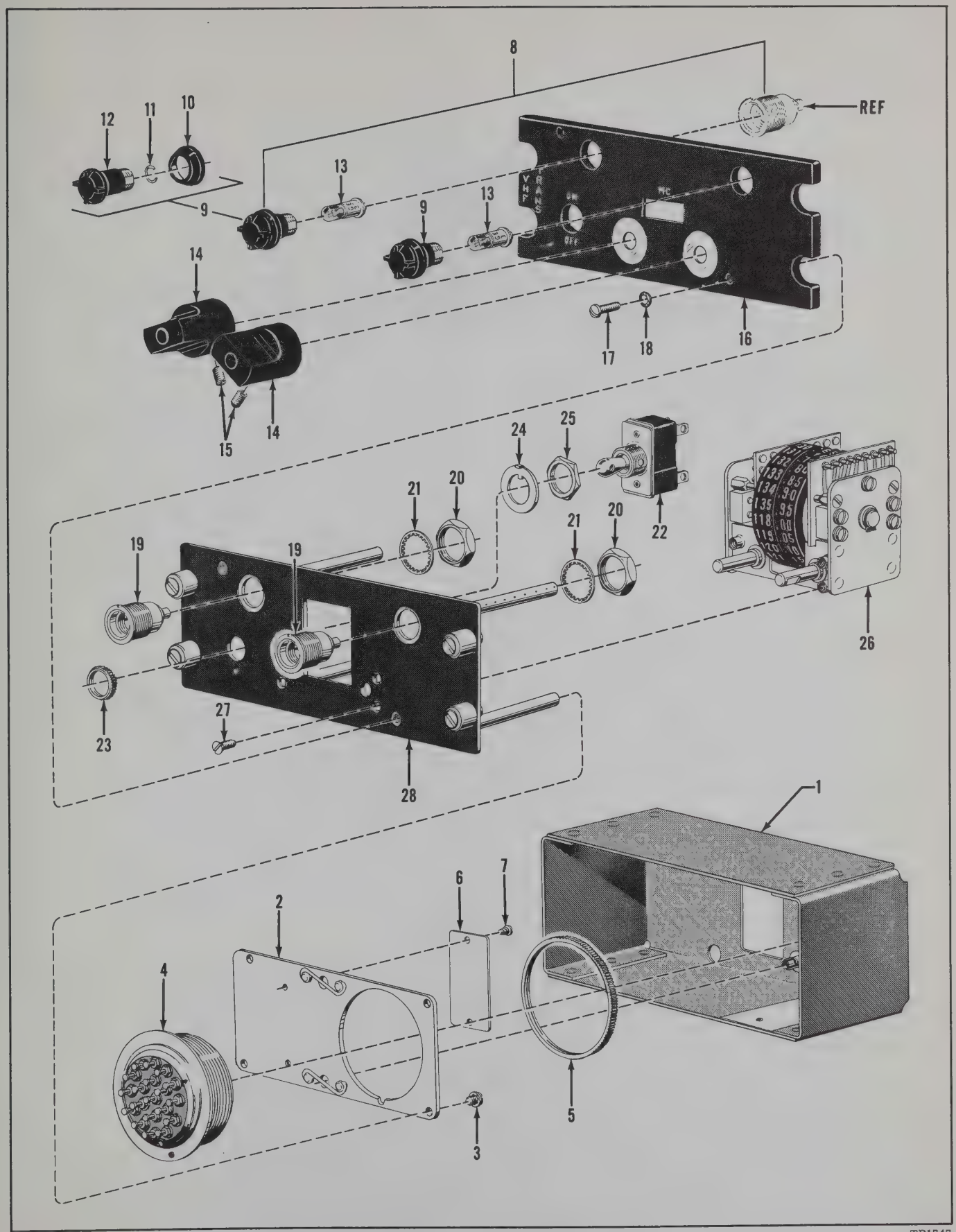

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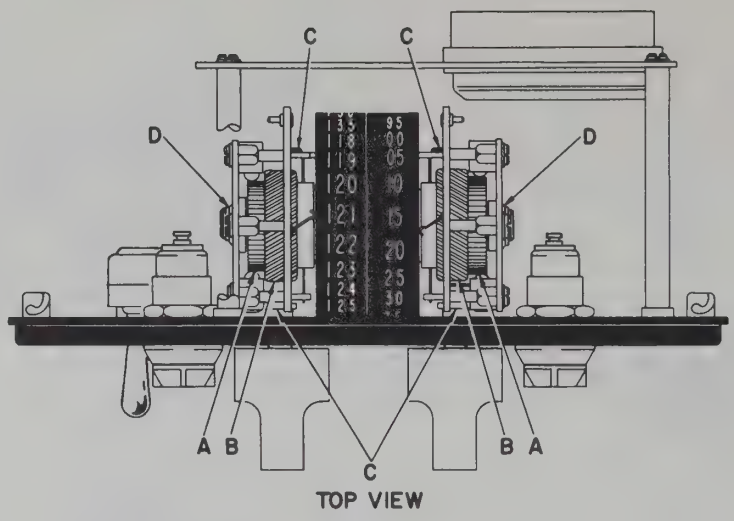
Figure 2-10. C-82A Control Unit Assembly



Caution

Keep oil and grease away from spring contacts and printed circuit contact plates, otherwise intermittent operation may result.

Point of Lubrication	Part to be Lubricated	Lubrication Period (hours)	Lubricant	Application
A	Detent Gear	500	Aeroshell No. 7 Grease	Apply thin coat to gear teeth with artist's brush.
B	Bevel Gear	500	Aeroshell No. 7 Grease	Apply thin coat to gear teeth with artist's brush.
C	Control Shaft Bearing	500	Pioneer No. 10 Oil	Invert unit and apply one drop to each bearing.
D	Drum Shaft Bearing	500	Pioneer No. 10 Oil	Apply one drop to each bearing.

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Figure 2-11. C-82A Control Unit, Lubrication Data

SECTION III

TEST PROCEDURES

3-1. GENERAL.

WARNING

Voltages are present in this equipment which are dangerous and which may be fatal if contacted. Observe all safety precautions.

This section contains test procedures for the ARC Type T-25A VHF Transmitter, ARC Type DV-12A Dynaverter, and ARC Type C-82A Control Unit. The procedures are intended to prove satisfactory performance upon completion of reassembly, and to provide alignment and adjustment information. If new tubes are installed, it is not necessary to realign the T-25A. Alignment should be necessary only if major parts, such as tuning capacitors or tuning arms, have been replaced. No adjustment of the tuned-circuit elements should be made unless the r-f output measurements, as compared with those listed in Table 3-4, are unsatisfactory and no other cause can be determined.

3-2. T-25A TEST PROCEDURES.

Test Equipment. Table 3-1 lists the test equipment required for maintenance of the T-25A; equivalent test equipment may be substituted. Use of the ARC Type BTK-25A Bench Test Kit (see Figure 3-1) is recommended to facilitate performing all procedures. The BTK-25A includes an ARC Type H-25A Transmitter Test Unit, an ARC Type P-12 Power Unit with ARC Type DV-10A Dynaverter, and all necessary interconnecting cable assemblies for the test and alignment procedures. If a BTK-25A is not available, other test equipment, shown in Figure 3-2, is required.

TABLE 3-1. TEST EQUIPMENT

Qty	Name	Designation	Characteristics
1	Audio Oscillator	Hewlett-Packard Model 200AB	—
1	Bench Test Kit	ARC Type BTK-25A	—
1	Control Unit[1] [2]	ARC Type C-82A	—
1	Dynaverter[3]	ARC Type DV-10A	—
		ARC Type DV-11A	—
		ARC Type DV-12A(14V)	—
		ARC Type DV-12A(28V)	—
	Dynamotor[3]	ARC Type D-10A(14V)	—
		ARC Type D-10A(28V)	—
1	Headset	ARC-11935	—
1	Linear Detector[4]	—	(See Figure 3-3)
1	Microphone	ARC-11937	Carbon, single-button
1	Multimeter	Simpson Model 260 or Weston Model 564	20,000 ohms/volt or 1000 ohms/volt
1	Oscilloscope[4]	Tektronix Type 310	—
1	Primary Power Supply	—	14- or 28-volt dc rectifier or storage battery
1	R-f Wattmeter	Bird Electronic Model 61	51.5 ohms, 15 watts
1	Tuning Wand	—	Teflon wand equipped with iron and brass tips
1	Vacuum Tube Voltmeter	Hewlett-Packard Model 410B	—
1	Vacuum Tube Voltmeter[1]	Ballantine Model 300	—
1	Wrench	Bristol No. 4	—

[1] Required only when an ARC Type BTK-25A Bench Test Kit is not available.
[2] In place of the C-82A, either Channel Selector Switch ARC-20730 or ARC Type CC-10A Custom Control Unit (ARC-24020), and a power on-off switch may be used.
[3] High voltage for the T-25A is obtained from a Dynaverter or a dynamotor of the correct input voltage rating. The DV-12A is mounted on the rear of the T-25A. The other Dynaverters or dynamotor may be installed on an associated ARC vhf receiver or on an ARC Type P-12 Power Unit.
[4] Optional equipment. Refer to Modulator in paragraph 3-2.

Test Conditions. The following test conditions are used, unless specified otherwise:

Input Voltage: 13.75 volts dc (14-volt models) or 27.5 volts dc (28-volt models), as measured with the test setup voltmeter.

Sidetone Output Termination: 300 ohms noninductive, provided in the H-25A Transmitter Test Unit of the BTK-25A and required in the test setup without BTK-25A (see Figure 3-2). (Parallel loads, such as a headset, must not be connected to the PHONE jack of either test setup during sidetone output measurements.)

Transmitter Load: During all transmitter tests, a 15-watt, 52-ohm dummy load must be connected to T-25A ANT jack.

Warm-up: At least 5 minutes prior to measurements.

Preliminary Procedure. Remove the T-25A dust cover and perform the preliminary procedure given in Table 3-2. Two separate procedures are given: one for a bench test setup with an ARC Type BTK-25A Bench Test Kit (see Figure 3-1), the other for a bench test setup without a BTK-25A (see Figure 3-2).

TABLE 3-2. PRELIMINARY PROCEDURE

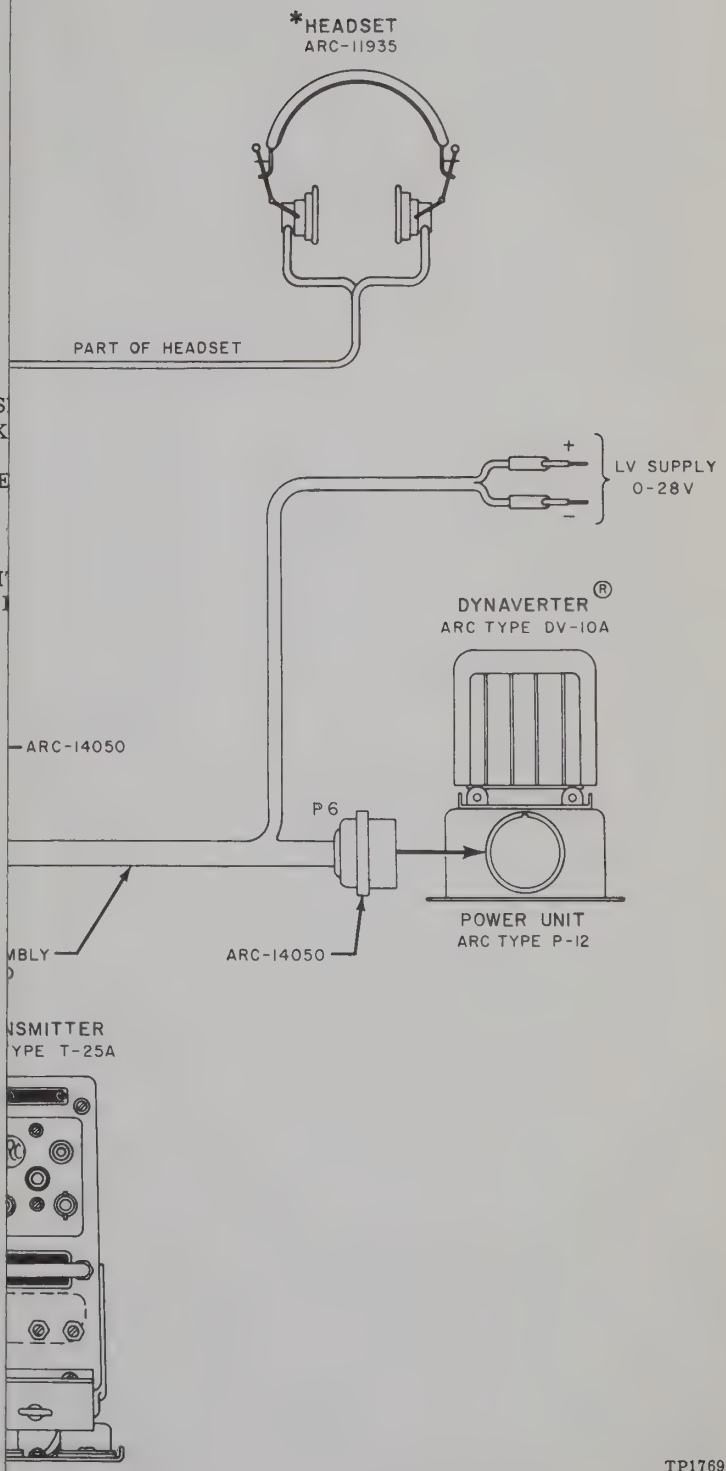
Step	Procedure With BTK-25A	Procedure Without BTK-25A	Normal Indication
1	Set LV power switch OFF, PWR RELAY switch OFF, TRANS KEY switch OFF, WHISTLE-THROUGH switch OFF, CONTROL switch to INT or EXT (as required), MOD CAL control full counterclockwise.	Set TRANS KEY and WHISTLE-THROUGH switches OFF. Set C-82A power switch OFF.	None.
2	Interconnect equipment as shown in Figure 3-1. Caution R-f wattmeter and cable between RF IN connector on test unit and ANT connector on T-25A must be connected, otherwise V106 in T-25A will be damaged when the transmitter is keyed.	Interconnect equipment as shown in Figure 3-2. Caution R-f wattmeter must be connected to T-25A ANT connector, otherwise V106 in T-25A will be damaged when the transmitter is keyed.	None.
3	Set d-c meter switch to 0-40V. Set LV POWER switch ON (green lamp will light). Apply primary power to T-25A by setting PWR RELAY switch ON (red lamp will light) or, if C-82A is connected, set C-82A power switch ON (red lamp will also light for external control).	Apply primary power by setting C-82A power switch ON.	None.
4	Adjust primary power supply to 13.75 or 27.5 volts dc as read on d-c meter, depending on voltage rating of equipment. Allow equipment to warm up for approximately 5 minutes.	Same as with BTK-25A.	Meter reads as noted.
5	Set d-c meter switch to 0-400V.	Read HV voltmeter	Meter indicates no-load output of HV power supply.

NOTES:

1. PARTS MARKED WITH AN ASTERIS
NOT PART OF THE BENCH TEST K

2. IF NO EXTERNAL CONTROL IS USE
"EXT-INT" CONTROL SWITCH TO
POSITION.

3. TRANSMITTER AND CONTROL UNI
CEPTACLES ARE AT THE REAR O
UNIT.



TP1769

Figure 3-1. Bench Test Interconnection Diagram With BTK-25A

Test Conditions. The following test conditions are used, unless specified otherwise:

Input Voltage: 13.75 volts dc (14-volt models) or 27.5 volts dc (28-volt models), as measured with the test setup voltmeter.

Sidetone Output Termination: 300 ohms noninductive, provided in the H-25A Transmitter Test Unit of the BTK-25A and required in the test setup without BTK-25A (see Figure 3-2). (Parallel loads, such as a headset, must not be connected to the PHONE jack of either test setup during sidetone output measurements.)

Transmitter Load: During all transmitter tests, a 15-watt, 52-ohm dummy load must be connected to T-25A ANT jack.

Warm-up: At least 5 minutes prior to measurements.

Preliminary Procedure. Remove the T-25A dust cover and perform the preliminary procedure given in Table 3-2. Two separate procedures are given: one for a bench test setup with an ARC Type BTK-25A Bench Test Kit (see Figure 3-1), the other for a bench test setup without a BTK-25A (see Figure 3-2).

TABLE 3-2. PRELIMINARY PROCEDURE

Step	Procedure With BTK-25A	Procedure Without BTK-25A	Normal Indication
1	Set LV power switch OFF, PWR RELAY switch OFF, TRANS KEY switch OFF, WHISTLE-THROUGH switch OFF, CONTROL switch to INT or EXT (as required), MOD CAL control full counterclockwise.	Set TRANS KEY and WHISTLE-THROUGH switches OFF. Set C-82A power switch OFF.	None.
2	Interconnect equipment as shown in Figure 3-1. Caution R-f wattmeter and cable between RF IN connector on test unit and ANT connector on T-25A must be connected, otherwise V106 in T-25A will be damaged when the transmitter is keyed.	Interconnect equipment as shown in Figure 3-2. Caution R-f wattmeter must be connected to T-25A ANT connector, otherwise V106 in T-25A will be damaged when the transmitter is keyed.	None.
3	Set d-c meter switch to 0-40V. Set LV POWER switch ON (green lamp will light). Apply primary power to T-25A by setting PWR RELAY switch ON (red lamp will light) or, if C-82A is connected, set C-82A power switch ON (red lamp will also light for external control).	Apply primary power by setting C-82A power switch ON.	None.
4	Adjust primary power supply to 13.75 or 27.5 volts dc as read on d-c meter, depending on voltage rating of equipment. Allow equipment to warm up for approximately 5 minutes.	Same as with BTK-25A.	Meter reads as noted.
5	Set d-c meter switch to 0-400V.	Read HV voltmeter	Meter indicates no-load output of HV power supply.

NOTES:

1. PARTS MARKED WITH AN ASTERISK (*) ARE NOT PART OF THE BENCH TEST KIT.
2. IF NO EXTERNAL CONTROL IS USED, SET "EXT-INT" CONTROL SWITCH TO "INT" POSITION.
3. TRANSMITTER AND CONTROL UNIT RECEPTACLES ARE AT THE REAR OF EACH UNIT.

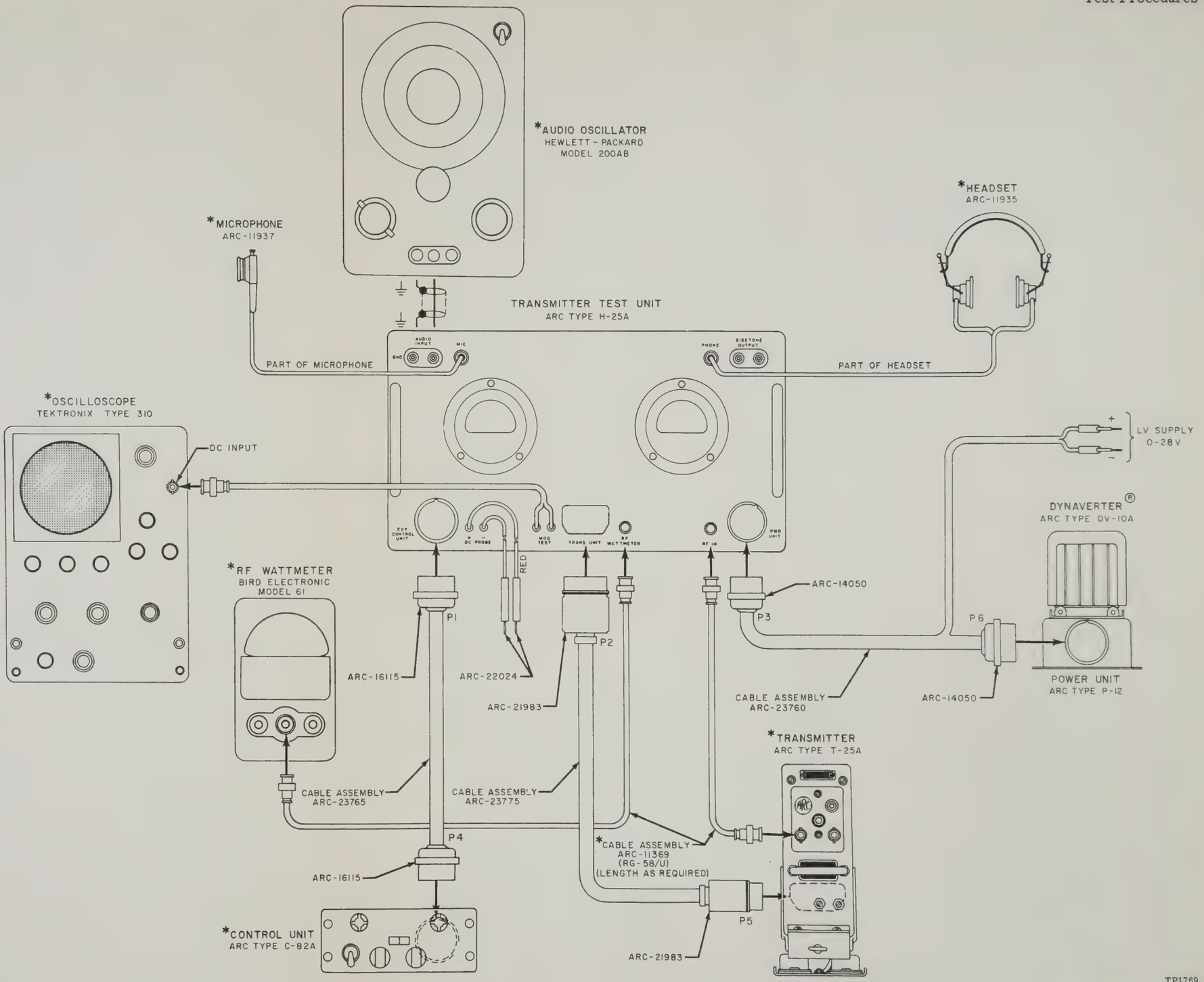
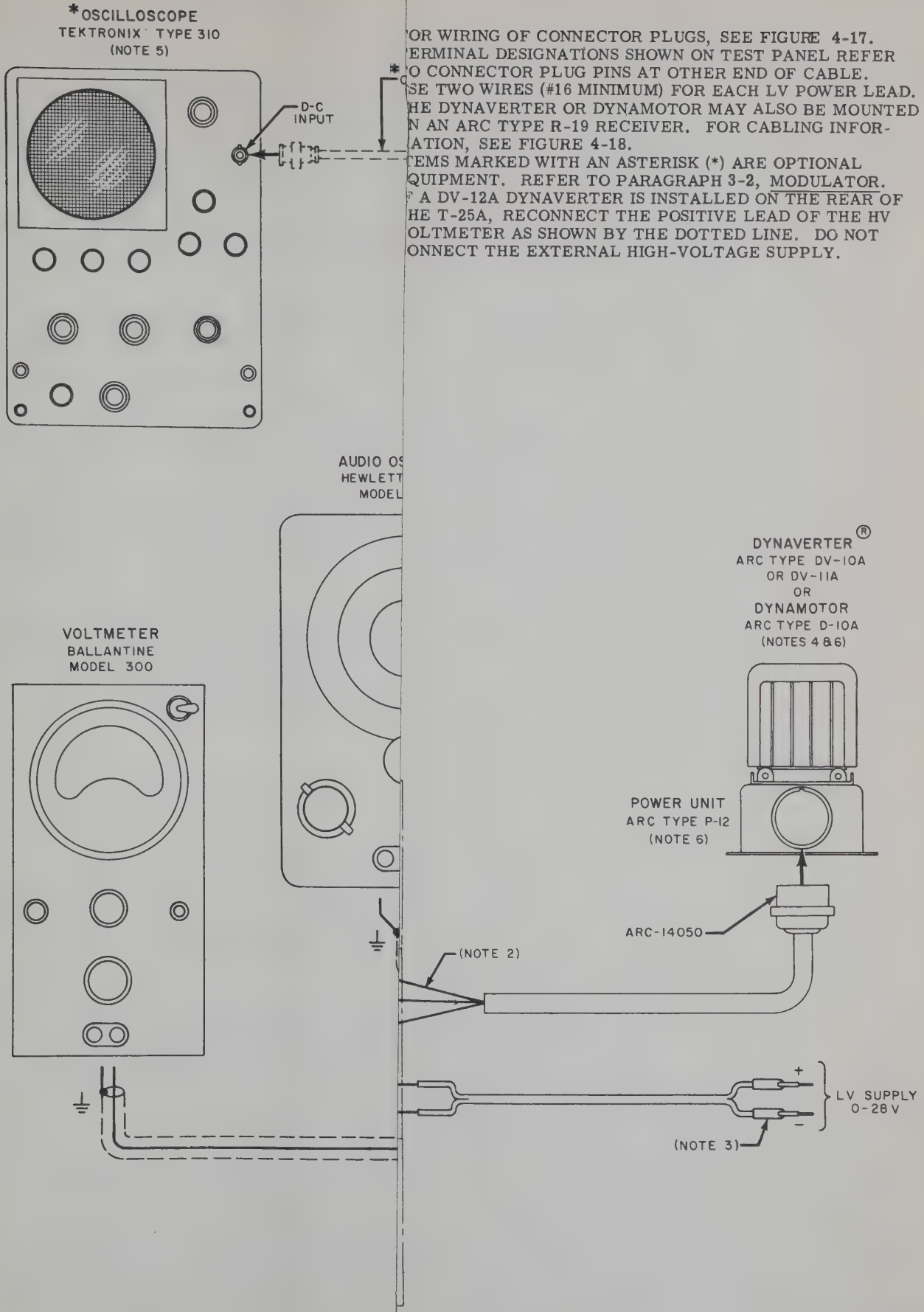
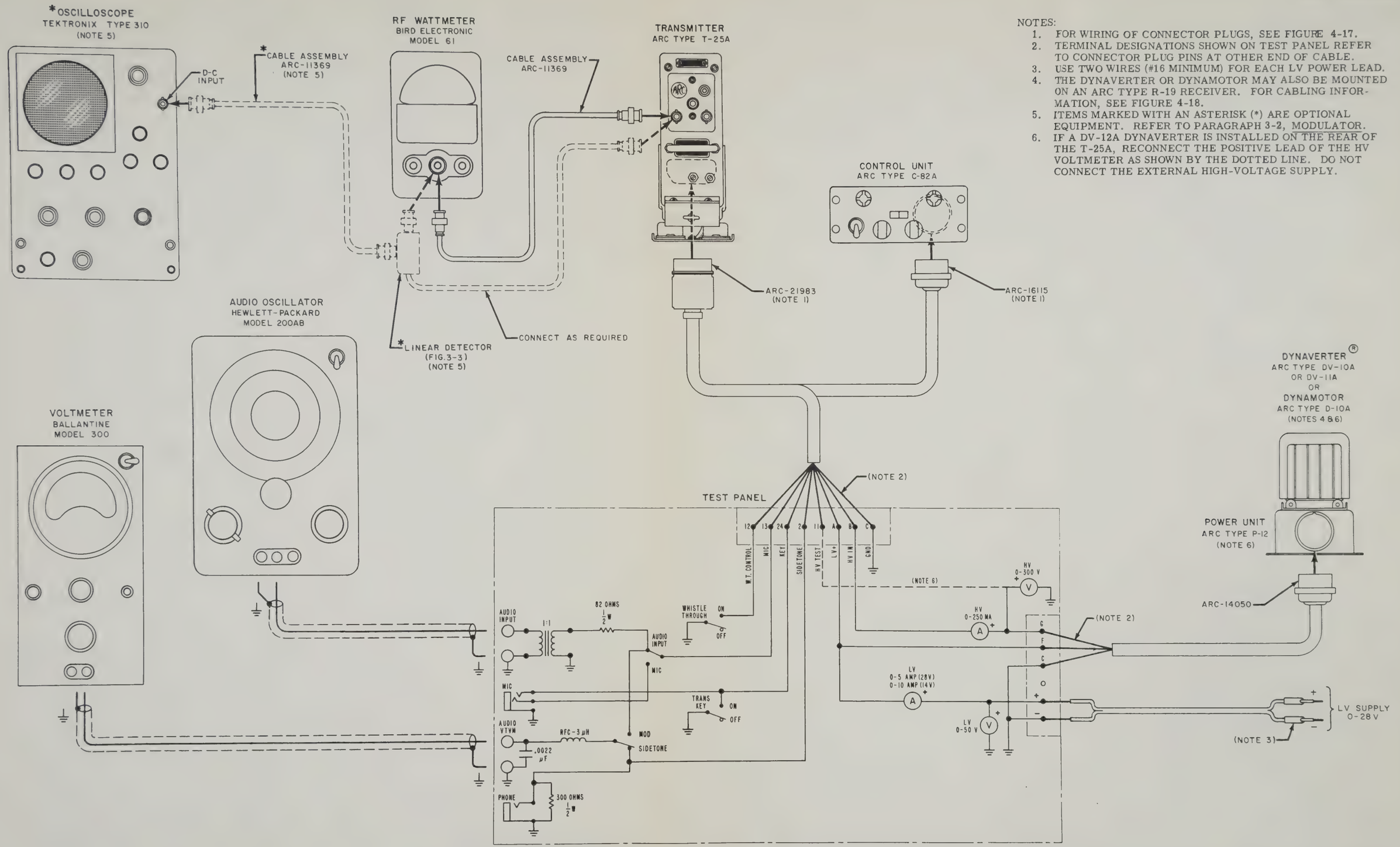


Figure 3-1. Bench Test Interconnection Diagram With BTK-25A



TP1543B

Figure 3-2. Bench Test Interconnection Diagram Without BTK-25A



NOTES:

1. FOR WIRING OF CONNECTOR PLUGS, SEE FIGURE 4-17.
2. TERMINAL DESIGNATIONS SHOWN ON TEST PANEL REFER TO CONNECTOR PLUG PINS AT OTHER END OF CABLE.
3. USE TWO WIRES (#16 MINIMUM) FOR EACH LV POWER LEAD.
4. THE DYNAVERTER OR DYNAMOTOR MAY ALSO BE MOUNTED ON AN ARC TYPE R-19 RECEIVER. FOR CABLING INFORMATION, SEE FIGURE 4-18.
5. ITEMS MARKED WITH AN ASTERISK (*) ARE OPTIONAL EQUIPMENT. REFER TO PARAGRAPH 3-2, MODULATOR.
6. IF A DV-12A DYNAVERTER IS INSTALLED ON THE REAR OF THE T-25A, RECONNECT THE POSITIVE LEAD OF THE HV VOLTMETER AS SHOWN BY THE DOTTED LINE. DO NOT CONNECT THE EXTERNAL HIGH-VOLTAGE SUPPLY.

TP1543B

Figure 3-2. Bench Test Interconnection Diagram Without BTK-25A

Channeling Performance.

Step 1. Operate the megacycle channel selector switch to select each megacycle channel and then fractional megacycle selector switch to select each fractional megacycle channel. Observe T-25A crystal drums for correct positioning. The crystal drums should index to the selected frequency.

Step 2. Adjust primary power supply to 10.0 volts dc for 14-volt units or 20.0 volts dc for 28-volt units, as indicated on the LV voltmeter, and repeat Step 1.

Step 3. Readjust primary power supply to 13.75 volts dc or 27.5 volts dc, as required.

Fractional Megacycle Oscillator.

Step 1. Set WHISTLE-THROUGH switch to ON and adjust primary input voltage to 13.75 or 27.5 volts dc, as required.

Step 2. Connect r-f probe of Hewlett-Packard Model 410B Vacuum Tube Voltmeter to junction of C112 and L105 (other end of C112 connects to pin 4 of V102). Set vtvm to read 10 volts ac full scale.

Step 3. Set fractional megacycle switch on control unit successively from .00 to .95 mc and observe voltages indicated on vtvm. Output voltage should be 3.5 volts or greater for each setting, indicating proper operation of fractional megacycle oscillator and individual crystals. Set WHISTLE-THROUGH switch OFF.

Megacycle Oscillator-Doubler.

Step 1. Set channel selector switches on control unit to 135.00 mc.

Step 2. Use a No. 4 Bristol wrench to loosen setscrew in tuning arm of capacitor C107 (see Figure 3-4.) Rotate capacitor shaft by means of screwdriver slot in end of shaft. Turn until slot points approximately 15° counterclockwise past the line joining the other four capacitors. Tighten setscrew.

Step 3. Set Model 410B vtvm to read 3 volts ac full scale. Connect r-f probe to high side of doubler coil L102. Set WHISTLE-THROUGH switch ON. Adjust trimmer capacitor C106, located on rear bulkhead of transmitter (see Figure 3-4), for a maximum reading on vtvm.

Step 4. Check doubler coil L102 with the tuning wand for optimum peaking. If adjustment is required, adjust the turn spacing of L102 for peak output.

Step 5. Set megacycle channel selector switch to 118 mc. Check oscillator coil L103 with the tuning wand for optimum peaking. If adjustment is required, adjust the turn spacing of L103 for peak output.

Step 6. Check doubler coil L102 with the tuning wand for optimum peaking. If adjustment is required, tune C107 with its tuning arm adjustment screw (see Figure 3-4).

Step 7. Repeat Steps 3 through 6 until no further improvement in output occurs.

Step 8. Set megacycle channel selector switch on control unit successively from 118 to 135 mc and note that doubler output voltage is present on all channels, as indicated on the vtvm. Presence of this voltage indicates that all megacycle crystals are functioning.

Note

The voltage observed on the vtvm for each channel is not the true doubler output voltage, due to the detuning effect of the vtvm r-f probe.

Step 9. Set megacycle channel selector switch to 135 mc. Connect r-f probe to one side of L109 and set vtvm to read 10 volts ac full scale. Using tuning wand, check tuning of doubler coil L102. The coil should not be peaked, but the turn spacing should be adjusted for an approximate 10% voltage decrease from maximum on the high-inductance side.

Step 10. Set megacycle channel selector switch to 118 mc and again adjust L102 for a 10% voltage decrease from maximum on the low-inductance side.

Step 11. Repeat Steps 9 and 10 until the percentage decrease at 118 mc and 135 mc is approximately equal. Set WHISTLE-THROUGH switch OFF.

Mixer and R-f Amplifier.

Step 1. Set vtvm to read -100 volts dc full scale. Connect d-c probe to transmitter test point TP3 (see Figure 3-4). Set channel selector switches to 135.50 mc. Set WHISTLE-THROUGH switch ON.

Step 2. Using a No. 4 Bristol wrench, loosen setscrews in tuning arms of mixer plate capacitor C117, amplifier plate capacitor C127, and driver plate capacitor C137.

Step 3. Tune C117, C127, and C137 by means of screwdriver slots in ends of capacitor shafts (see Figure 3-4) for a maximum reading on vtvm. Note that each rotor section of split-stator capacitors C117, C127, and C137 is not at the minimum-capacitance position and that capacitance will increase when the capacitors are rotated in a counterclockwise direction, as viewed from the shaft end.

Step 4. Use tuning wand on tank coils L109, L111, and L115 to determine if optimum peaking has been achieved. If optimum peaking is not obtained on any coil with minimum or greater capacitance, increase coil-turn spacing with an insulated tool until optimum peaking is obtained. Tighten setscrews in tuning arms of C117, C127, and C137, taking care not to disturb the settings. The vtvm reading should be approximately -40 volts.

Step 5. Set channel selector switches to 118.50 mc. Tune C117, C127, and C137 by means of their respective tuning arm adjustment screws (see Figure 3-4) for a maximum reading on the vtvm.

Step 6. Set channel selector switches to 135.50 mc. Turn WHISTLE-THROUGH switch OFF and TRANS KEY switch ON. Loosen setscrews in tuning arms of C137 and C140, and tune the capacitors by means of their slotted shafts for a maximum reading on the r-f wattmeter. Tighten setscrews.

Step 7. Set channel selector switches to 118.50 mc. Tune C137 and C140 by means of their tuning arm adjustment screws for a maximum reading on the r-f wattmeter.

Step 8. Using an insulated tool, adjust output coupling loop L120 for slightly less than maximum output on the undercoupled side of maximum coupling. Repeat Steps 6 and 7 to obtain maximum r-f output.

Step 9. Check power output at 135.00 mc and 135.95 mc. The power output at these two frequencies should be the same within 1 watt. If a difference greater than 1 watt is noted, check tank coils L109, L111, and L115 with tuning wand to determine the adjustment required to increase the lower of the two power outputs. Retune C127, C137, and C140 by means of their slotted shafts until power output is equalized within 1 watt.

Step 10. Check power output at 118.00 mc and 118.95 mc. The power output at these two frequencies should be the same within 1 watt. If a difference greater than 1 watt is noted, check tank coils L109, L111, and L115 with tuning wand to determine the adjustment required to increase the lower of the two power outputs. Retune C127, C137, and C140 by means of their tuning arm adjustment screws until the power output is equalized within 1 watt.

Step 11. Check for power output on all fractional megacycle channels and then on all megacycle channels. The power output on all channels should be 6 watts minimum. Set TRANS KEY to OFF.

Modulator.

General. The modulator adjustment may be made with an ARC Type BTK-25A Bench Test Kit, or with an oscilloscope or voltmeter if a BTK-25A is not available. The three methods are described in the following paragraphs.

BTK-25A Method.

Step 1. Connect Hewlett-Packard Model 200AB Audio Oscillator to AUDIO INPUT terminals of H-25A Transmitter Test Unit as shown in Figure 3-1.

Note

If desired, the modulator adjustment given in Steps 4, 5, and 6 of this procedure may be monitored using a Tektronix Type 310 Oscilloscope, or equivalent. Connect the d-c vertical input of the oscilloscope to the MOD TEST jacks of the H-25A (see Figure 3-1). The desired modulation pattern is shown in Step 4 of the next paragraph.

Step 2. Turn audio oscillator on and adjust frequency to 1000 cps. Set channel selector switches to 126.50 mc. Loosen locknut on MIC control located at the front of the modulator chassis.

Step 3. Set H-25A a-c meter switch to AUDIO IN 0-1V. Press TRANS KEY switch to MOMENTARY, and adjust audio oscillator for an output of 0.5 volt as read on the a-c meter. Release TRANS KEY switch.

Step 4. Set a-c meter switch to MOD CAL. Press TRANS KEY switch to MOMENTARY, and adjust H-25A MOD CAL control to red-line (MOD CAL) indication on a-c meter. Repeat Step 3 to check audio input setting. Reset a-c meter switch to MOD CAL and readjust MOD CAL control to red-line indication, if required. Release TRANS KEY switch.

Step 5. Set a-c meter switch to MOD LEVEL. Press TRANS KEY switch to MOMENTARY. Observe modulation level on a-c meter. Adjust the modulator MIC control so that the reading is within the green (MOD LEVEL) sector of the a-c meter scale, corresponding to a satisfactory adjustment of modulation level. Release TRANS KEY switch.

Step 6. Repeat Steps 4 and 5 to check accuracy of all adjustments.

Note

Steps 4, 5, and 6 should be completed as quickly as possible to avoid shifts in calibration settings.

Step 7. To check sidetone voltage, set a-c switch to SIDETONE 0-10V. Set SIDETONE control on T-25A front panel full clockwise. Press TRANS KEY switch to MOMENTARY. Read sidetone voltage on a-c meter; meter reading should be greater than 5.5 volts. Release TRANS KEY switch.

Oscilloscope Method. The following method for adjusting the modulator without a BTK-25A requires the use of a Tektronix Type 310 Oscilloscope, or equivalent, and the linear detector shown in Figure 3-3 to observe the demodulated output signal of the T-25A. An alternative method, using a Ballantine Model 300 Voltmeter, is described in the next paragraph.

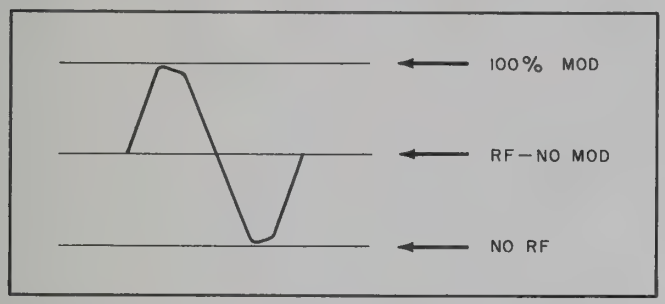
Step 1. Connect linear detector between ANT connector of T-25A and r-f wattmeter as shown in Figure 3-2. Connect linear detector to d-c vertical input of oscilloscope. Connect Hewlett-Packard model

200AB Audio Oscillator to AUDIO INPUT terminals of the test panel.

Step 2. Turn audio oscillator on. Set AUDIO INPUT-MIC switch to AUDIO INPUT. Set MOD-SIDETONE switch to MOD. Set channel selector switches to 126.50 mc. Adjust audio oscillator frequency to 1000 cps. Loosen locknut on MIC control located at front of modulator chassis.

Step 3. Set TRANS KEY switch ON. Set Ballantine Model 300 Voltmeter to read 1.0 volt full scale. Adjust audio oscillator to an output of 0.5 volt as indicated on the Model 300.

Step 4. Adjust MIC control so that carrier is modulated approximately 90 - 95% with a reasonable amount of clipping present, as indicated by the following oscilloscope pattern:



Lock MIC control, being careful not to disturb the setting. Set TRANS KEY switch OFF.

Step 5. To check sidetone, set Ballantine Model 300 Voltmeter to read 10 volts full scale. Set SIDETONE control on T-25A front panel full clockwise. Set MOD-SIDETONE switch to SIDETONE. Set TRANS KEY switch ON. Read sidetone voltage on the Model 300. The voltmeter reading should be greater than 5.5 volts. Set TRANS KEY switch OFF.

Voltmeter Method. The following method for adjusting the modulator requires a Ballantine Model 300 Voltmeter. An alternative method is described in the previous paragraph.

Step 1. Connect Hewlett-Packard Model 200AB Audio Oscillator to AUDIO INPUT terminals of the test panel (see Figure 3-2).

Step 2. Turn audio oscillator on. Set AUDIO INPUT-MIC switch to AUDIO INPUT. Set MOD-SIDETONE switch to MOD. Set channel selector switches to 126.50 mc. Adjust audio oscillator frequency to 1000 cps. Loosen locknut on MIC control, located at front of modulator chassis.

Step 3. Set TRANS KEY switch ON. Set Ballantine Model 300 Voltmeter to read 1.0 volt full scale. Adjust audio oscillator for an output of 0.5 volt as indicated on the Model 300. Set TRANS KEY switch OFF.

Step 4. Set SIDETONE control on T-25A front panel full clockwise. Set MOD-SIDETONE switch to SIDETONE. Set Model 300 to read 10 volts full scale. Set TRANS KEY switch ON.

Step 5. Increase setting of MIC control clockwise until sidetone output reading on Model 300 just reaches a peak value (this reading should be greater than 6.0 volts). Rotate MIC control slightly counterclockwise so that the sidetone reading drops approximately 0.5 volt (this setting is equivalent to approximately 90% modulation of the r-f carrier). Lock MIC control, being careful not to disturb the setting. Set TRANS KEY switch OFF.

Whistle-through.

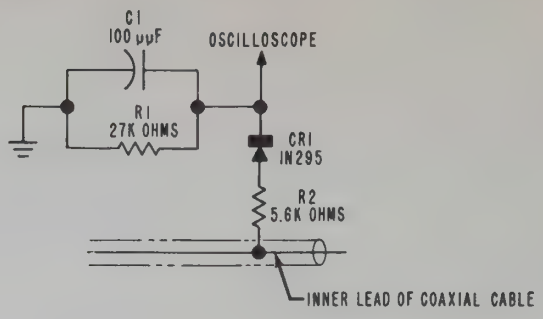
Step 1. Set Hewlett-Packard Model 410B vtvm to read 30 volts ac full scale, and connect a-c probe to test point TP1 of the T-25A (see Figure 3-4). Set channel selector switches to 126.50 mc.

Step 2. Set WHISTLE-THROUGH switch ON. The Model 410B should indicate at least 17 volts ac.

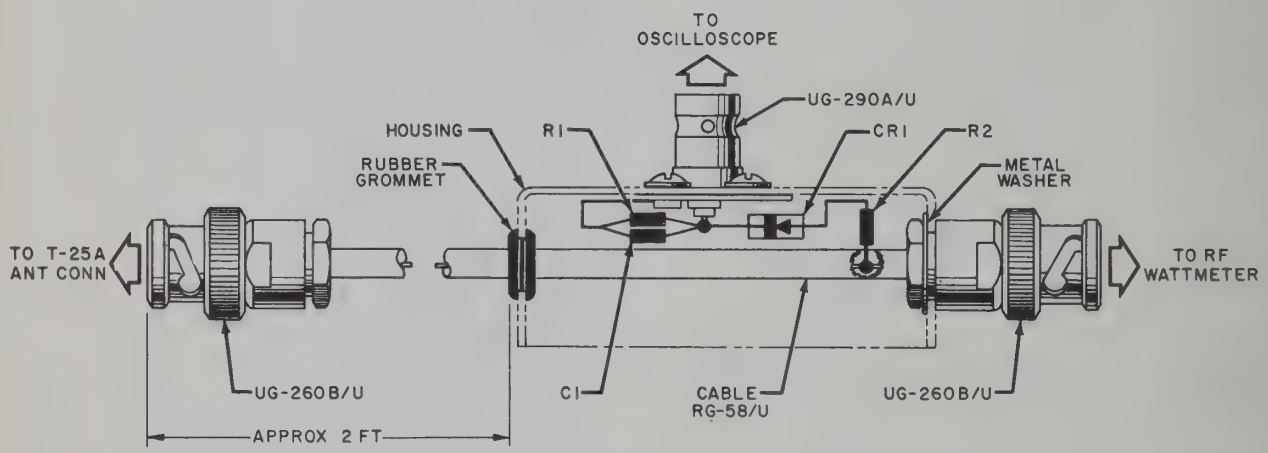
Note

The operation of the whistle-through circuit can also be checked by measuring the d-c voltage on TP1, using a vtvm, a Simpson Model 260 Multimeter, or the d-c voltmeter in the H-25A. The meter should read at least -20 volts dc during whistle-through.

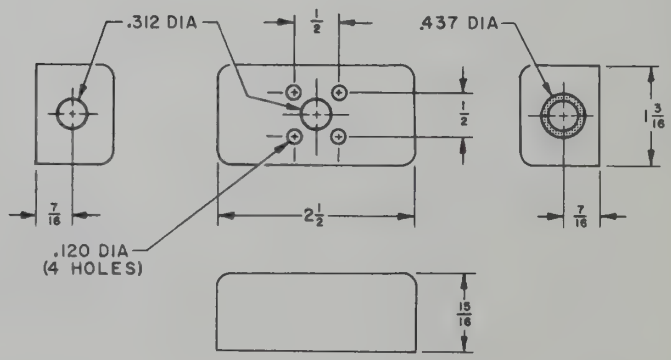
Input and Level Measurements. Input and level measurements for the T-25A are given in Tables 3-3 and 3-4, respectively. All measurements were made under the conditions noted.



SCHEMATIC DIAGRAM



WIRING DIAGRAM

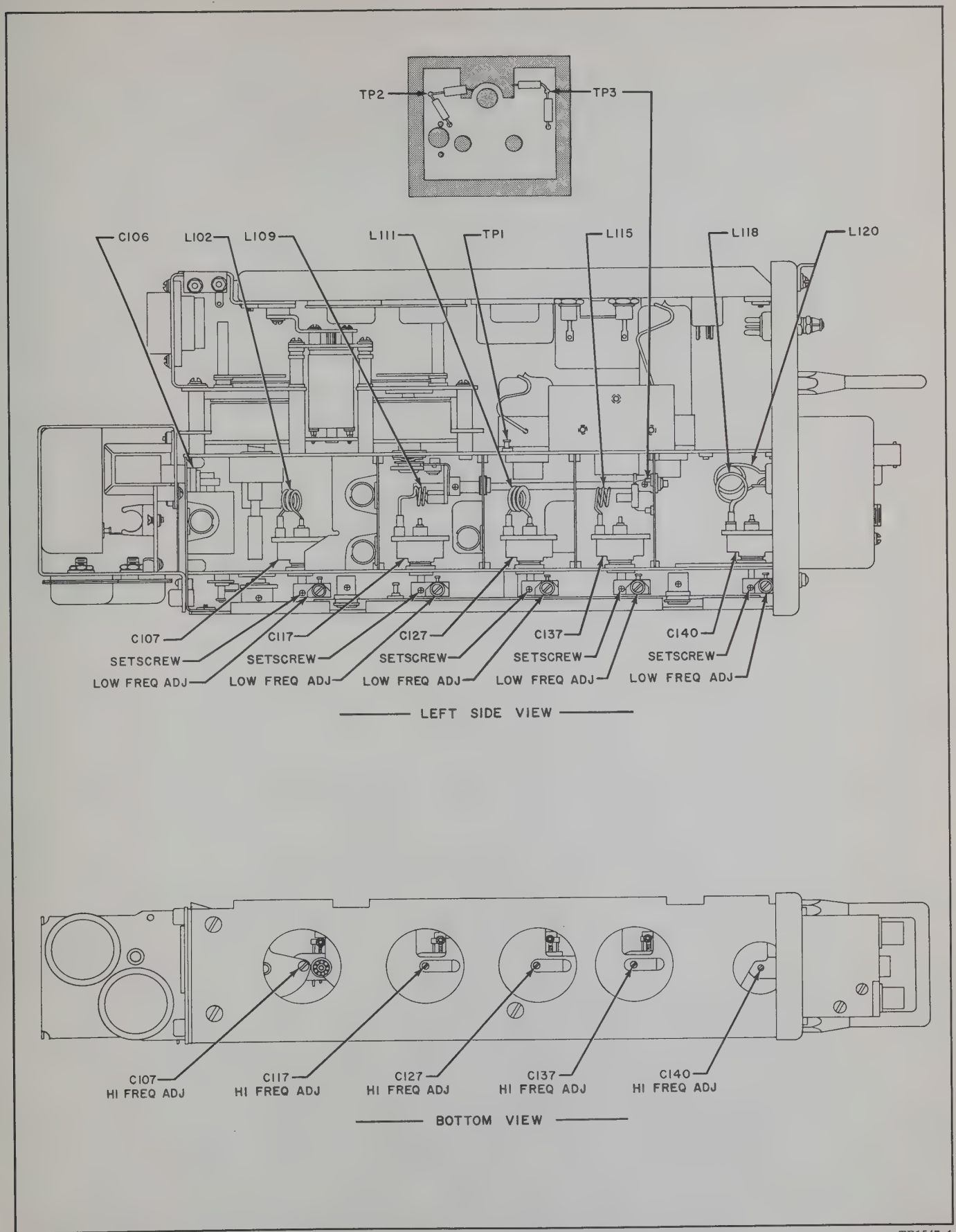


TYPICAL HOUSING
(.031 ALUMINUM)

NOTE: DIMENSIONS ARE IN INCHES.

TP1545

Figure 3-3. Linear Detector for T-25A Bench Test Setup



TP1547-1

Figure 3-4. T-25A Transmitter, Adjustment Points

TABLE 3-3. T-25A INPUT MEASUREMENTS

Conditions:

1. Equipment connected as shown in Figure 3-1 or Figure 3-2. Test conditions described in paragraph 3-2 and the preliminary procedure given in Table 3-2 also apply.
2. Channel selector switches set to 135.00 mc.
3. Measurements made with no r-f carrier modulation.
4. If a BTK-25A is used, all input measurements made with the H-25A d-c meter, as noted.
5. If a BTK-25A is not used, all input measurements made using Weston Model 301 Voltmeters and Ammeters installed in the test panel shown in Figure 3-2.

MEASUREMENTS WITH BTK-25A
(See Figure 3-1)

H-25A D-c Meter Switch Position	Stand-by Condition[1]	Transmit Condition[1]
0-8A[2]	0.9 (1.6) amp	2.5 (5.6) amp
0-400MA	—	141 ma
0-40V	27.5 (13.75) volts	27.5 (13.75) volts
0-400V[3]	270 volts	260 volts

MEASUREMENTS WITHOUT BTK-25A
(See Figure 3-2)

Test Panel D-c Meter	Stand-by Condition[1]	Transmit Condition[1]
0-5A (0-10A)[2]	0.9 (1.6) amp	2.5 (5.6) amp
0-250MA	—	141 ma
0-50V	27.5 (13.75) volts	27.5 (13.75) volts
0-300V[3]	270 volts	260 volts

[1] Currents and voltages shown in parentheses are for 14-volt model.
[2] LV currents shown are for T-25A plus Dynaverter. If a dynamotor is used in place of a Dynaverter, stand-by and transmit currents will be 1.5 (2.5) and 3.2 (6.2) amperes, respectively.
[3] HV values shown are for a Dynaverter. If a dynamotor is used, stand-by and transmit voltages will be 300 and 250 volts, respectively.

TABLE 3-4. T-25A LEVEL MEASUREMENTS

Conditions:

1. Equipment connected as shown in Figure 3-1 or 3-2. The test conditions of paragraph 3-2 and the preliminary procedure of Table 3-2 also apply.
2. Channel selector switches set to 135.00 mc.
3. Unless otherwise noted, all voltage measurements made with a vacuum tube voltmeter such as Hewlett-Packard Model 410B, or equivalent.
4. Transmitter voltage measurements made with no r-f carrier modulation.
5. For whistle-through measurements, set TRANS KEY switch OFF and WHISTLE-THROUGH switch ON.
6. Modulator voltages measured with a Hewlett-Packard Model 200AB Audio Oscillator connected to AUDIO INPUT terminals of test set-up. If a BTK-25A is not used, set AUDIO INPUT-MIC switch to

TABLE 3-4. T-25A LEVEL MEASUREMENTS - Continued

Conditions (cont):

AUDIO INPUT, MOD-SIDETONE switch to MOD, and connect Ballantine Model 300 Voltmeter as shown in Figure 3-2. Adjust audio oscillator to 1000 cps for a 0.5-volt reading on H-25A a-c meter or on Model 300. Set modulator MIC control tp approximately midpoint position.

OSCILLATOR R-F VOLTAGES

Oscillator	Frequency (mc)	Test Point	R-f Voltage (volts)
Megacycle	118 to 135[1]	Junction C103 and L102	0.5 to 2.0
Fractional Megacycle	.00 to .95	Junction C112 and L105	3.5 to 7.5

TRANSMITTER TEST POINT VOLTAGES
(Refer to Condition No. 4)

Test Point	Frequency[2] (mc)	D-c Voltage (volts)
TP1 (driver amplifier grid)	118.00 to 135.95	-3.5 to -18.0
TP2 (power amplifier grid)	118.00 to 135.95	-30 to -70
TP3 (power amplifier grid)	118.00 to 135.95	-30 to -70

WHISTLE-THROUGH VOLTAGE
(Refer to Condition No. 5)

Test Point	Frequency (mc)	A-c Voltage (volts)	D-c Voltage[3] (volts)
TP1 (driver amplifier grid)	126.50	17 to 29	-20 to -35

MODULATOR AUDIO LEVEL MEASUREMENTS
(Refer to Condition No. 6)

Test Point	A-c Voltage (volts)
Q301 base	0.33
Q302 base	2.43
Q303 base to Q304 base	9.9
Q305 base to Q306 base	31.0

[1] Select megacycle channels only.
[2] Select all megacycle channels and then all fractional megacycle channels.
[3] A Simpson Model 260 Multimeter (20,000 ohms-per-volt), or equivalent, can also be used for this measurement.

3-3. DV-12A TEST PROCEDURE.

Test Equipment. Use the special equipment listed in Table 3-5, or its equivalent, to test the DV-12A for satisfactory performance after repair or overhaul.

Procedure.

> Caution
> Watch for excessive input current to the Dynaverter while performing the test procedure. If the input current exceeds 2 amperes before the Dynaverter starts, or if the input current exceeds 5 amperes at any time during the test, disconnect the test immediately and reject the unit.

Step 1. With power supply set for zero output, connect the test equipment and Dynaverter as shown in Figure 3-5. Check polarity of connections to the Dynaverter before proceeding.

Step 2. Set the variable output resistor for 1250 ohms.

Step 3. Slowly increase the input voltage until the Dynaverter starts (whistle is heard and output voltmeter deflects). The input voltmeter should indicate 9.5 volts or less (14-volt models) or 8.0 volts or less (28-volt models).

Step 4. Set the variable output resistor for 2600 ohms.

Step 5. Slowly increase the input voltage until the input voltmeter indicates 12.0 volt (14-volt models) or 26.0 volts (28-volt models).

Step 6. Adjust the variable output resistor until the output ammeter indicates 100 milliamperes. The input ammeter should indicate less than 2.6 amperes (14-volt models) or 1.3 amperes (28-volt models). The output voltmeter should indicate between 250 and 270 volts (14- or 28-volt models). The output ripple voltmeter should indicate less than 1.0 volt ac (14-volt models) or 2.0 volts ac (28-volt models).

Step 7. Adjust the variable output resistor until the output ammeter indicates 200 milliamperes (approximately 1250 ohms). The input ammeter should indicate no more than 4.6 amperes (14-volt models) or 2.3 amperes (28-volt models). The output voltmeter should indicate between 245 and 265 volts (14-volt models) or between 240 and 260 volts (28-volt models).

Step 8. Decrease the input voltage to zero, and disconnect the variable output resistor.

Step 9. Slowly increase the input voltage until the input voltmeter indicates 12.0 volts (14-volt models) or 26.0 volts (28-volt models). The input ammeter should indicate less than 0.6 ampere (14-volt models) or 0.3 ampere (28-volt models). The output voltmeter should indicate less than 285 volts (14- or 28-volt models).

Step 10. Decrease the input voltage to zero, and disconnect the Dynaverter from the test circuit.

TABLE 3-5. TEST EQUIPMENT FOR DV-12A

Equipment	Manufacturer	Type or Model	Use in Circuit
Ammeter, 0-5 amp dc	Weston	301	Input Ammeter
Capacitor, 0.22 μf, 400 volts (2 sections required)	Aircraft Radio Corp.	ARC-5413	C1A and C1B
Fuse, 10 amp	—	—	F1
Milliammeter, 0-250 ma dc	Weston	301	Output Ammeter
Power Decade Resistor	Clarostat	240-C	Variable Output Resistor
R-f Choke	Aircraft Radio Corp.	ARC-5546	L1
Vacuum Tube Voltmeter	Ballantine	300	Output Ripple Voltmeter
Variable Voltage-Regulated Power Supply (0-32 volts dc)	Sorensen	T60-5 "Nobatron"	Power Supply
Voltmeter, 0-50 volts dc	Weston	301	Input Voltmeter
Voltmeter, 0-300 volts dc	Weston	301	Output Voltmeter

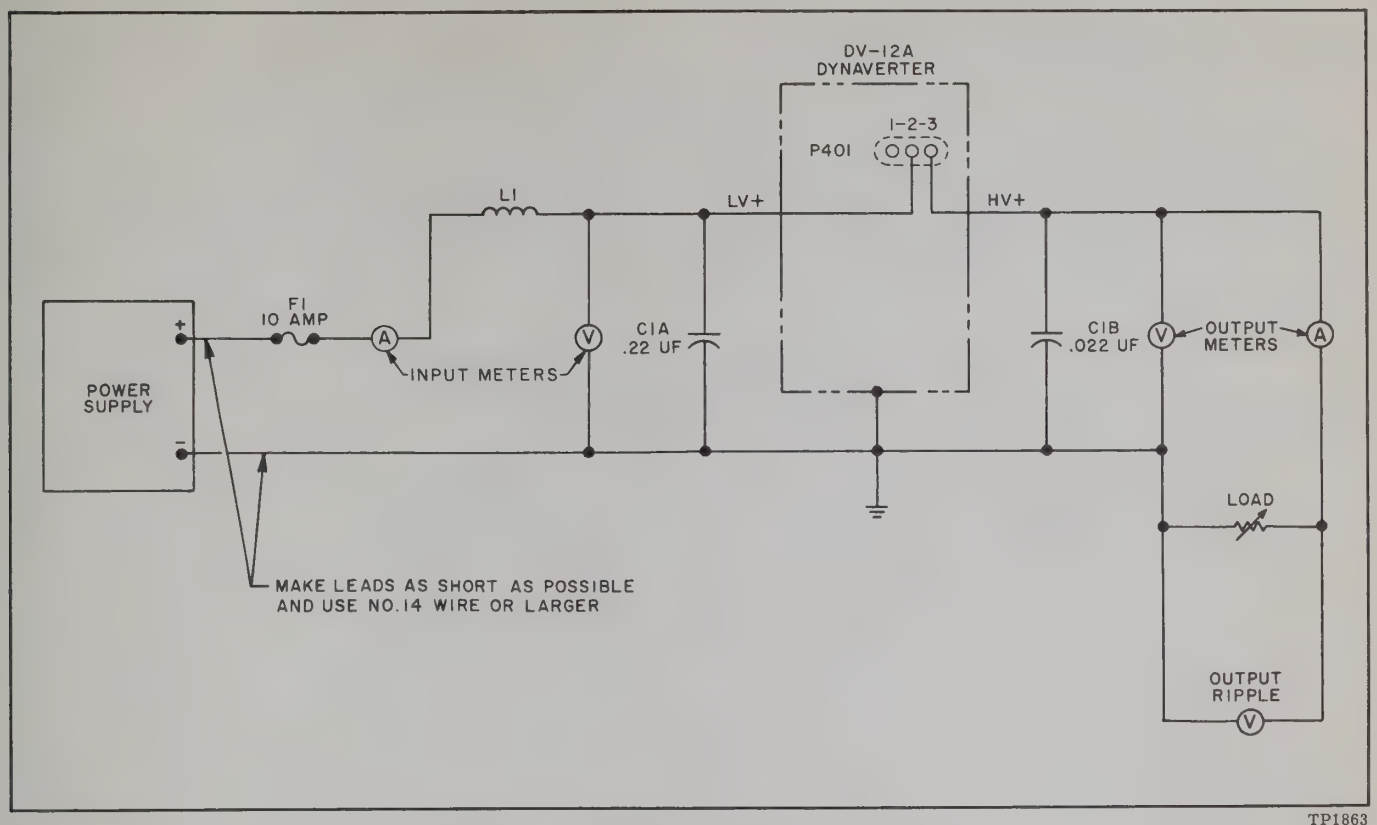


Figure 3-5. DV-12A Dynaverter, Test Circuit

3-4. C-82A TEST PROCEDURE.

Test Equipment. To test the C-82A for satisfactory performance after repair or overhaul, only an ohmmeter (Simpson Model 260, or equivalent) is required. However, use of an ARC Type BTK-25A Bench Test Kit with a T-25A will facilitate checking the continuity of the channel selector switches in the C-82A. Two test procedures are given: one using the BTK-25A and the ohmmeter, the other using the ohmmeter only.

Procedure with BTK-25A.

Step 1. With the ohmmeter on the R x 1 scale, measure the resistance between pins M and G (ground) of J201 of the C-82A. The meter should read approximately 30 ohms (for 14-volt lamps installed) or 60 ohms (for 28-volt lamps installed).

Step 2. Perform the preliminary procedure given in Table 3-2.

Step 3. Set the d-c meter switch on the H-25A panel to 0-8A. Set the C-82A power switch ON. If the power switch is operating correctly, the red PWR RELAY lamp on the H-25A panel should light, and the H-25A d-c meter should read stand-by input current of 1.6 amperes (14-volt models) or 0.9 ampere (28-volt models).

Step 4. Operate the C-82A megacycle channel selector switch to select all megacycle channels and observe the TRANS CYCLING panel lamp indications on the H-25A. Compare them with the lamp indications listed in Table 3-6 for correct continuity. If a fault is indicated by the lamps, see note in Step 5.

Step 5. Operate the C-82A fractional megacycle channel selector switch to select all fractional megacycle channels and observe the FRACT CYCLING panel lamp indications on the H-25A. Compare them with the lamp indications listed in Table 3-6.

Note

If a fault is indicated by the lamps, determine whether the fault is in the C-82A channel selector switches or in the T-25A tuner assembly by substituting other units. For the C-82A, use the channel selector switch assembly provided in the H-25A panel.

Procedure with Ohmmeter.

Step 1. With the ohmmeter on the R x 1 scale, measure the resistance between pins M and G (ground) of J201 of the C-82A. The meter should read ap-

proximately 30 ohms (for 14-volt lamps installed) or 60 ohms (for 28-volt lamps installed).

Step 2. Set the C-82A power switch OFF. Using the ohmmeter on the R x 1 scale, check for an open circuit between pins S and G of J201. Set the power switch ON. The meter should read zero resistance between pins S and G.

Step 3. Operate the C-82A megacycle channel selector switch to select each megacycle channel and make continuity checks for each channel in accordance with the table in Figure 4-16.

Step 4. Operate the C-82A fractional megacycle channel selector switch to select each fractional megacycle channel and make continuity checks for each channel in accordance with the table in Figure 4-16.

TABLE 3-6. BTK-25A LAMP INDICATIONS FOR CONTINUITY CHECKS OF CHANNEL SELECTOR SWITCHES

Switch Position	TRANS CYCLING Lamps[1]	Switch Position	FRACT CYCLING Lamps[1]
118	C, E	.00	N, O
119	A, D	.05	N, O, P
120	A, B, E	.10	N, R
121	B, C	.15	N, O, P, Q
122	C, D	.20	Q
123	D, E	.25	O, P, Q, R
124	E	.30	P
125	A	.35	N, P, Q, R
126	B	.40	O
127	C	.45	O, Q, R
128	D	.50	N
129	A, E	.55	N, P, R
130	A, B	.60	R
131	A, B, C	.65	O, Q
132	A, B, C, D	.70	Q, R
133	B, C, D, E	.75	P, R
134	A, C, D, E	.80	P, Q
135	B, D, E	.85	N, Q
		.90	O, P
		.95	N, O, R

[1] Letters refer to illuminated lamps only. Letters also indicate grounded control wire terminals of J201 in C-82A.

SECTION IV

DIAGRAMS

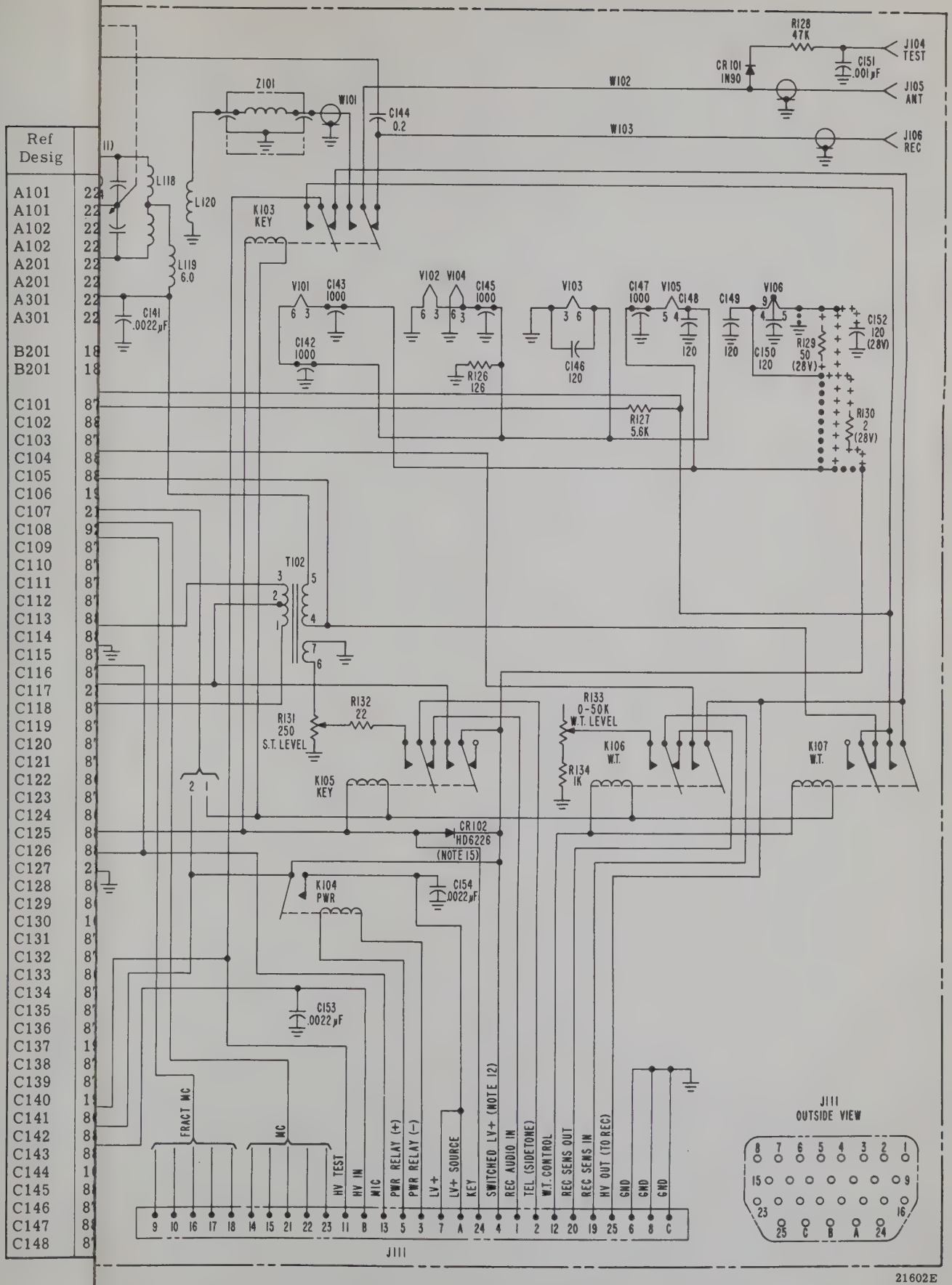


Figure 4-1. T-25A Transmitter, Schematic Diagram

ARC PART NO.

Ref Desig	ARC Part No.
A101	22328-0014
A101	22328-0028
A102	22367-0014
A102	22367-0028
A201	22277-0014
A201	22277-0028
A301	22337-0014
A301	22337-0028
B201	18800
B201	18801
C101	8796-0121
C102	8870-0510
C103	8791-0200
C104	8870-0510
C105	8832
C106	19603
C107	21326
C108	9280
C109	8765-0240
C110	8765-0240
C111	8765-0240
C112	8765-0240
C113	8870-0241
C114	8870-0241
C115	8791-0200
C116	8791-0200
C117	21326
C118	8791-9701
C119	8791-9401
C120	8796-0121
C121	8796-0121
C122	8625-9224
C123	8796-0121
C124	8626-9474
C125	8870-0510
C126	8870-0510
C127	21326
C128	8627-9153
C129	8627-9103
C130	10281
C131	8796-0121
C132	8796-0121
C133	8625-9224
C134	8796-0121
C135	8791-9801
C136	8791-0200
C137	19639
C138	8791-0200
C139	8796-0121
C140	19420
C141	8625-9224
C142	8832
C143	8832
C144	10281
C145	8832
C146	8796-0121
C147	8832
C148	8796-0121

Ref Desig	ARC Part No.
C149	8796-0121
C150	8796-0121
C151	8625-9104
C152	8796-0121
C153	8625-9224
C154	8625-9224
C155	8796-0121
C301	8914-0100
C302	8914-0100
C303	8924-0995
C304	8627-9223
C305	8626-9334
C306	8626-9334
CR101	19663
CR102	23037
CR301	8923-0100
CR302	22298-0360
J101	19336
J102	p/o 19669 and 19661
J103	19336
J104	8803-5410
J105	15185
J106	15185
J107	p/o 19669
J108	21673
J109	9391
J110	22153
J111	21984
K101	19664
K101	19665
K102	19664
K102	19665
K103	22276-0014
K103	22276-0028
K104	14484
K104	14485
K105	22276-0014
K105	22276-0028
K106	12587
K106	12588
K107	12587
K107	12588
L101	8877-9682
L102	19620
L103	19923
L104	8877-9101
L105	8877-9101
L106	14141
L107	14141
L108	14141
L109	19694
L110	14141
L111	19620
L112	22206
L113	22206
L114	8877-9101
L115	22142

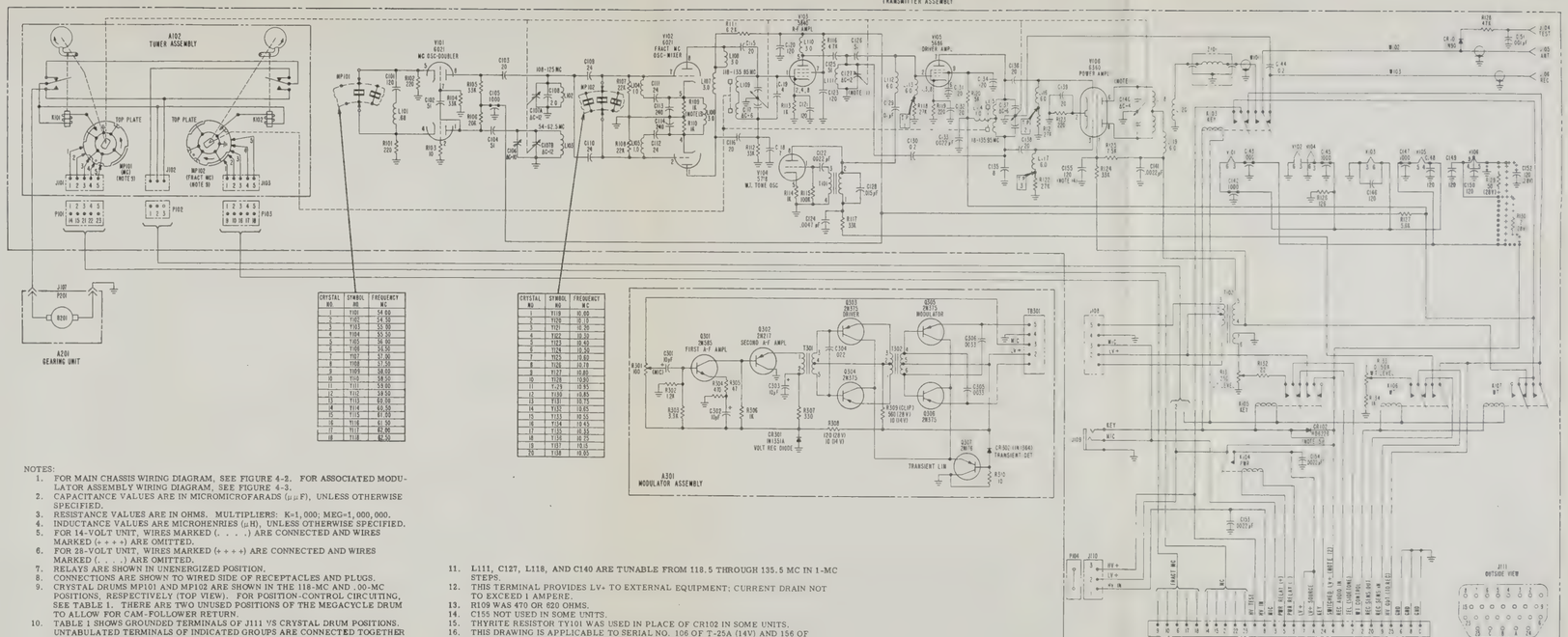
Ref Desig	ARC Part No.
L116	22206
L117	22206
L118	21833
L119	22206
L120	p/o 22147
MP101	p/o 22367-0014
MP101	p/o 22367-0028
MP102	p/o 22367-0014
MP102	p/o 22367-0028
P101	19339
P102	22190
P103	19339
P104	22151
P201	p/o 18800
P201	p/o 18801
Q301	22292
Q302	22293
Q303	22289
Q304	22289
Q305	22289
Q306	22289
Q307	22290
R101	200-0221
R102	200-0221
R103	204-0100
R104	200-0333
R105	201-0333
R106	201-0203
R107	200-0223
R108	200-0223
R109	200-0102
R110	200-0102
R111	201-0622
R112	200-0333
R113	201-0102
R114	200-0102
R115	200-0104
R116	201-0472
R117	201-0333
R118	201-0273
R119	201-0221
R120	201-0153
R121	201-0273
R122	201-0273
R123	203-0221
R124	201-0333
R125	201-0753
R126	209-0006
R127	203-0562
R128	200-0473
R129	207-0590
R130	209-0009
R131	8815-0251
R132	201-0220
R133	8815-0503
R134	201-0102

Ref Desig	ARC Part No.
R301	8915-0101
R302	200-0122
R303	200-0332
R304	200-0471
R305	200-0470
R306	200-0102
R307	200-0331
R308	203-0100
R308	203-0121
R309	202-0100
R309	202-0561
R310	202-0100
T101	18052
T102	22195-0014
T102	22195-0028
T301	22340
T302	22339
TB301	22334
V101	700-0136
V102	700-0136
V103	700-0129
V104	700-0122
V105	700-0121
V106	700-0204
W101	18327
W102	18327
W103	18327
XV105	21547
XV106	21547
Y101	19658-5400
Y102	19658-5450
Y103	19658-5500
Y104	19658-5550
Y105	19658-5600
Y106	19658-5650
Y107	19658-5700
Y108	19658-5750
Y109	19658-5800
Y110	19658-5850
Y111	19658-5900
Y112	19658-5950
Y113	19658-6000
Y114	19658-6050
Y115	19658-6100
Y116	19658-6150
Y117	19658-6200
Y118	19658-6250
Y119	19657-1000
Y120	19657-1010
Y121	19657-1020
Y122	19657-1030
Y123	19657-1040
Y124	19657-1050
Y125	19657-1060
Y126	19657-1070

Ref Desig	ARC Part No.
Y127	19657-1080
Y128	19657-1090
Y129	19657-1095
Y130	19657-1085
Y131	19657-1075
Y132	19657-1065
Y133	19657-1055
Y134	19657-1045
Y135	19657-1035
Y136	19657-1025
Y137	19657-1015
Y138	19657-1005
Z101	22147

TABLE 1

DIAL	MP102 J111 9, 10, 16, 17, 18	DIAL	MP101 J111 14, 15, 21, 22, 23
.00	9, 10	118	21, 23
.10	9, 18	119	14, 22
.20	17	120	14, 15, 23
.30	16	121	15, 21
.40	10	122	21, 22
.50	9	123	22, 23
.60	18	124	23
.70	17, 18	125	14
.80	16, 17	126	15
.90	10, 16	127	21
.95	9, 10, 18	128	22
.85	9, 17	129	14, 23
.75	16, 18	130	14, 15
.65	10, 17	131	14, 15, 21
.55	9, 16, 18	132	14, 15, 21, 22
.45	10, 17, 18	133	15, 21, 22, 23
.35	9, 16, 17, 18	134	14, 21, 22, 23
.25	10, 16, 17, 18	135	15, 22, 23
.15	9, 10, 16, 17		14, 21, 23
.05	9, 10, 16		15, 23



CRYSTAL NO	SYMBOL NO.	FREQUENCY MC
1	Y101	54.00
2	Y102	54.50
3	Y103	55.00
4	Y104	55.50
5	Y105	56.00
6	Y106	56.50
7	Y107	57.00
8	Y108	57.50
9	Y109	58.00
10	Y110	58.50
11	Y111	59.00
12	Y112	59.50
13	Y113	60.00
14	Y114	60.50
15	Y115	61.00
16	Y116	61.50
17	Y117	62.00
18	Y118	62.50

CRYSTAL NO	SYMBOL NO	FREQUENCY MC
1	Y119	±0.05
2	Y120	±0.10
3	Y121	±0.20
4	Y122	±0.30
5	Y123	±0.40
6	Y124	±0.50
7	Y125	±0.60
8	Y126	±0.70
9	Y127	±0.80
10	Y128	±0.90
11	Y129	±0.95
12	Y130	±0.85
13	Y131	±0.75
14	Y132	±0.65
15	Y133	±0.55
16	Y134	±0.45
17	Y135	±0.35
18	Y136	±0.25
19	Y137	±0.15
20	Y138	±0.05

NOTES:
1. FOR MAIN CHASSIS WIRING DIAGRAM, SEE FIGURE 4-2. FOR ASSOCIATED MODULATOR ASSEMBLY WIRING DIAGRAM, SEE FIGURE 4-3.
2. CAPACITANCE VALUES ARE IN MICROMICROFARADS (μμF), UNLESS OTHERWISE SPECIFIED.
3. RESISTANCE VALUES ARE IN OHMS. MULTIPLIERS: K=1,000; MEG=1,000,000.
4. INDUCTANCE VALUES ARE MICROHENRIES (μH), UNLESS OTHERWISE SPECIFIED.
5. FOR 14-VOLT UNIT, WIRES MARKED (. . . .) ARE CONNECTED AND WIRES MARKED (+ + + +) ARE OMITTED.
6. FOR 28-VOLT UNIT, WIRES MARKED (+ + + +) ARE CONNECTED AND WIRES MARKED (. . . .) ARE OMITTED.
7. RELAYS ARE SHOWN IN UNENERGIZED POSITION.
8. CONNECTIONS ARE SHOWN TO WIRED SIDE OF RECEPTACLES AND PLUGS.
9. CRYSTAL DRUMS MP101 AND MP102 ARE SHOWN IN THE 118-MC AND .00-MC POSITIONS, RESPECTIVELY (TOP VIEW). FOR POSITION-CONTROL CIRCUITING, SEE TABLE 1. THERE ARE TWO UNUSED POSITIONS OF THE MEGACYCLE DRUM TO ALLOW FOR CAM-FOLLOWER RETURN.
10. TABLE 1 SHOWS GROUNDED TERMINALS OF J111 VS CRYSTAL DRUM POSITIONS. UNTABULATED TERMINALS OF INDICATED GROUPS ARE CONNECTED TOGETHER AND TO ASSOCIATED RELAYS.
11. L111, C127, L118, AND C140 ARE TUNABLE FROM 118.5 THROUGH 135.5 MC IN 1-MC STEPS.
12. THIS TERMINAL PROVIDES LV+ TO EXTERNAL EQUIPMENT; CURRENT DRAIN NOT TO EXCEED 1 AMPERE.
13. R109 WAS 470 OR 820 OHMS.
14. C155 NOT USED IN SOME UNITS.
15. THYRITE RESISTOR TY101 WAS USED IN PLACE OF CR102 IN SOME UNITS.
16. THIS DRAWING IS APPLICABLE TO SERIAL NO. 106 OF T-25A (14V) AND 156 OF T-25A (28V) AND FOLLOWING.

Figure 4-1. T-25A Transmitter, Schematic Diagram

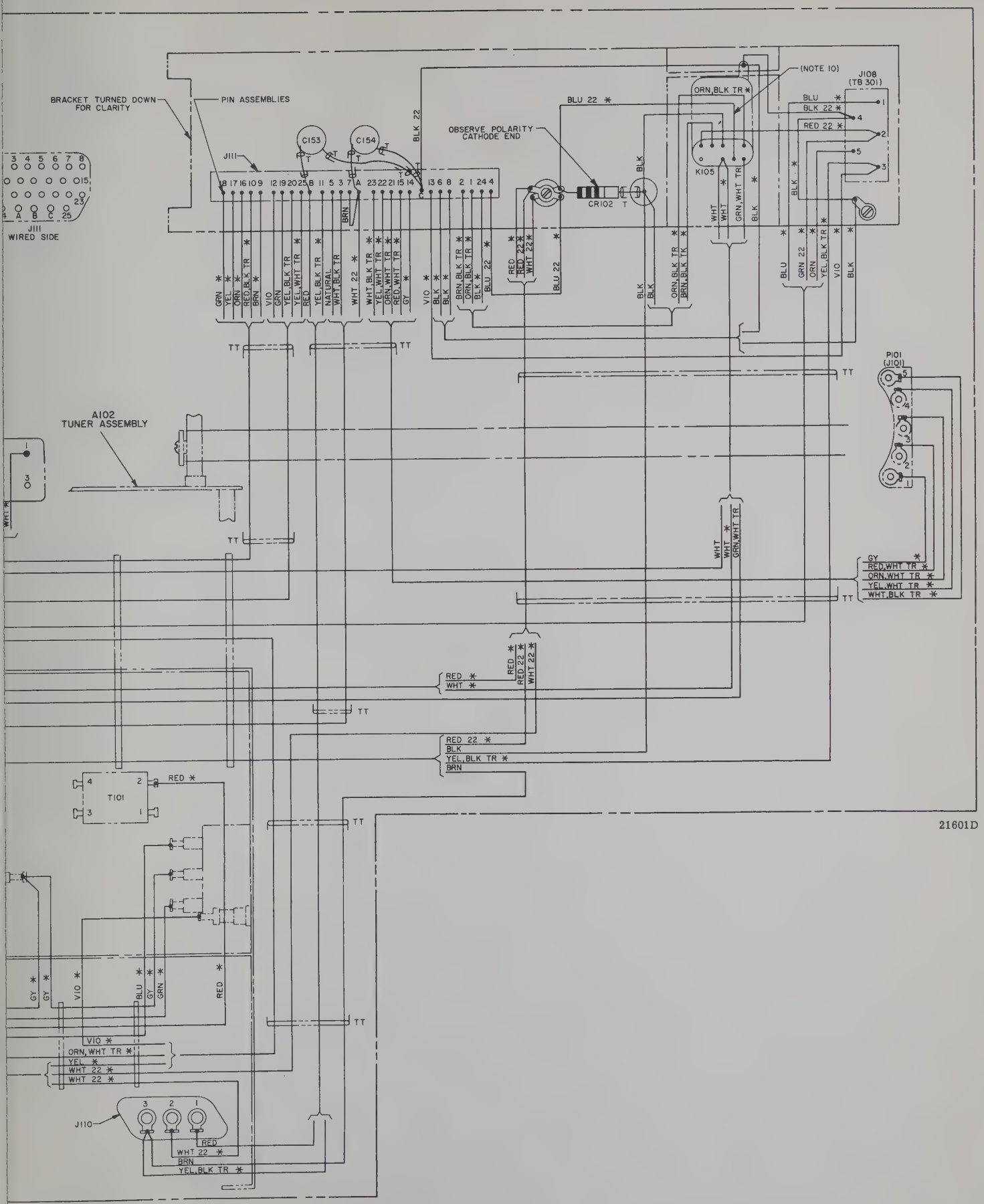


Figure 4-2. T-25A Transmitter, Wiring Diagram

NOTES:

1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. ASSOCIATED WIRING DIAGRAMS OF SEPARATE SUBASSEMBLIES ARE AS FOLLOWS:

SYMBOL NO.	ASSEMBLY	FIGURE NO.
A101	TRANSMITTER	4-5
A102	TUNER	4-6
A301	MODULATOR	4-3

3. FOR COMPLETE WIRING, SEE ALL VIEWS.
4. WIRES:

MARKING	DESCRIPTION
COLOR NOTE	#24 SOLID COPPER, TEFLON INSULATION
COLOR NOTE PLUS (*)	#24 STRANDED COPPER, TEFLON INSULATION
COLOR NOTE PLUS (22)	#22 SOLID COPPER, TEFLON INSULATION
COLOR NOTE PLUS (22*)	#22 STRANDED COPPER, TEFLON INSULATION
UNMARKED	#24 BARE, SOLID, TINNED COPPER

5. FOR 28-VOLT CHASSIS, WIRES MARKED (+ + +) ARE CONNECTED AND WIRES MARKED (. . .) ARE OMITTED.
6. FOR 14-VOLT CHASSIS, WIRES MARKED (. . .) ARE CONNECTED AND WIRES MARKED (+ + +) ARE OMITTED.
7. TEFLON TUBING OF .036-INCH I.D. IS INSTALLED OVER WIRE MARKED "T."
8. SPIRAL-CUT TUBING OF 1/8-INCH O.D. IS INSTALLED OVER GROUPS OF WIRES MARKED "TT."
9. PLUGS AND RECEPTACLES ARE VIEWED FROM WIRED SIDE.
10. TEFLON TUBING (1/4-INCH LENGTHS, .091-INCH I.D.) IS INSTALLED OVER WIRES CONNECTED TO K103 AND K105 AND IS PUSHED DOWN OVER RELAY TERMINALS.

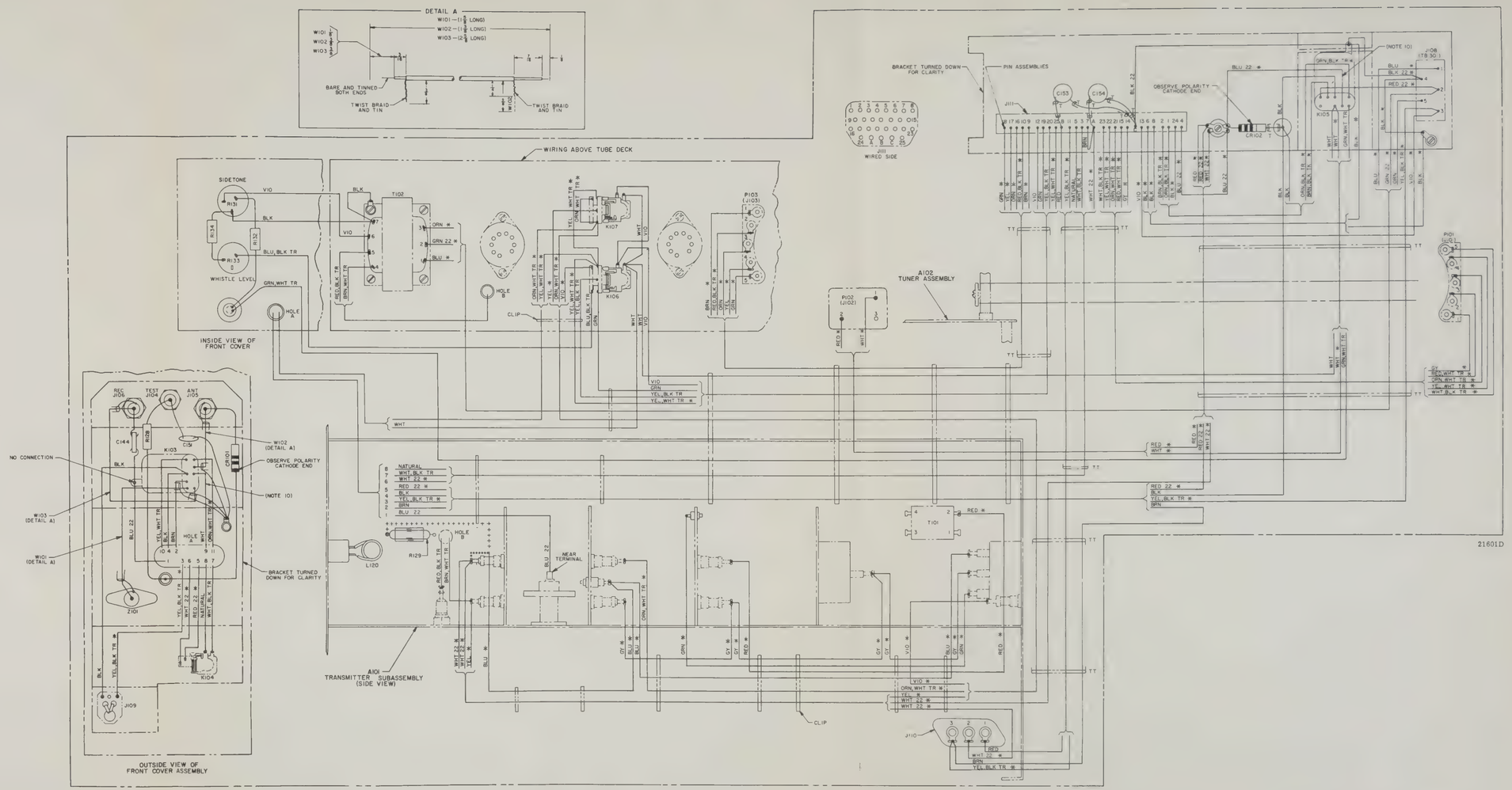
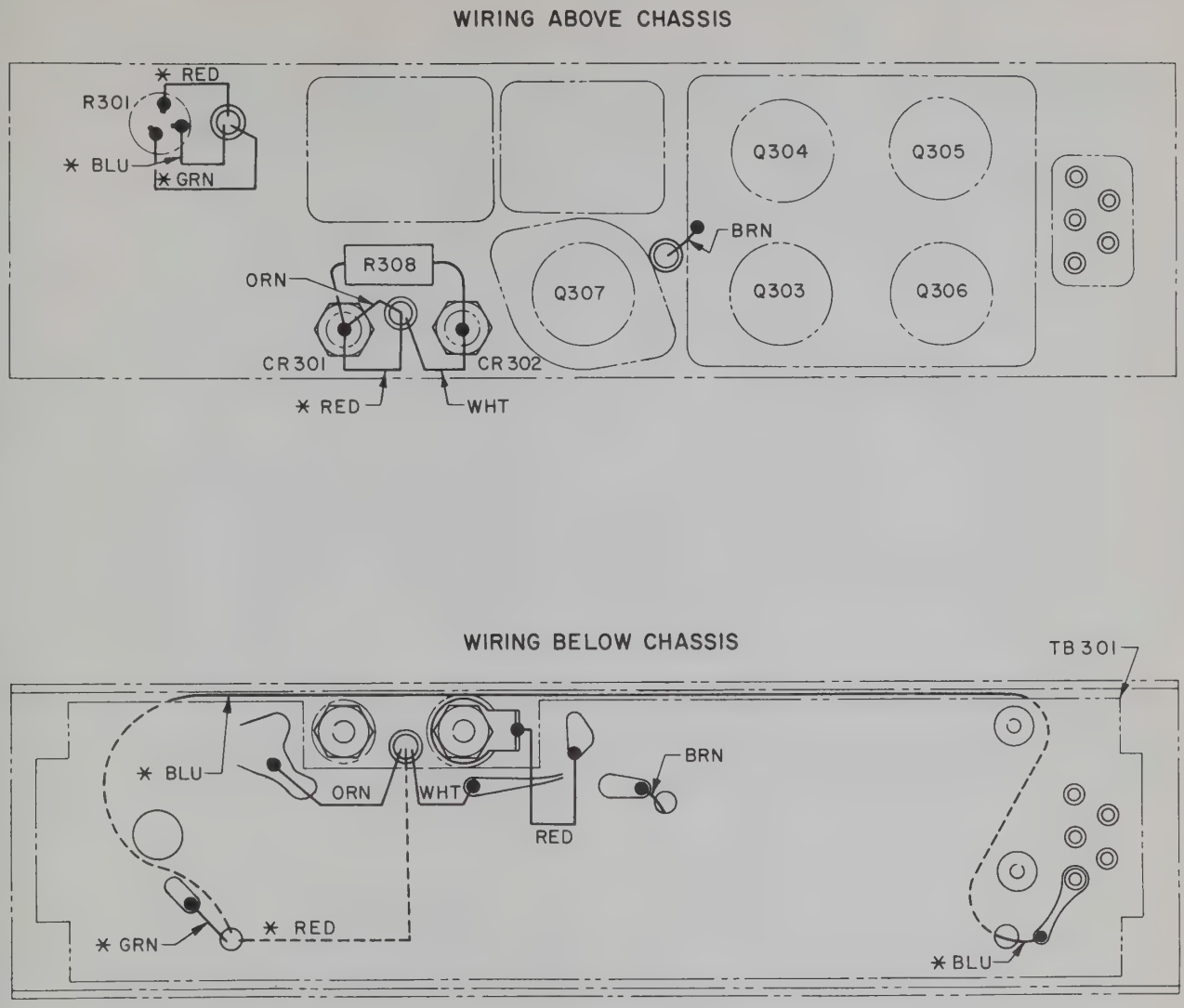


Figure 4-2. T-25A Transmitter, Wiring Diagram

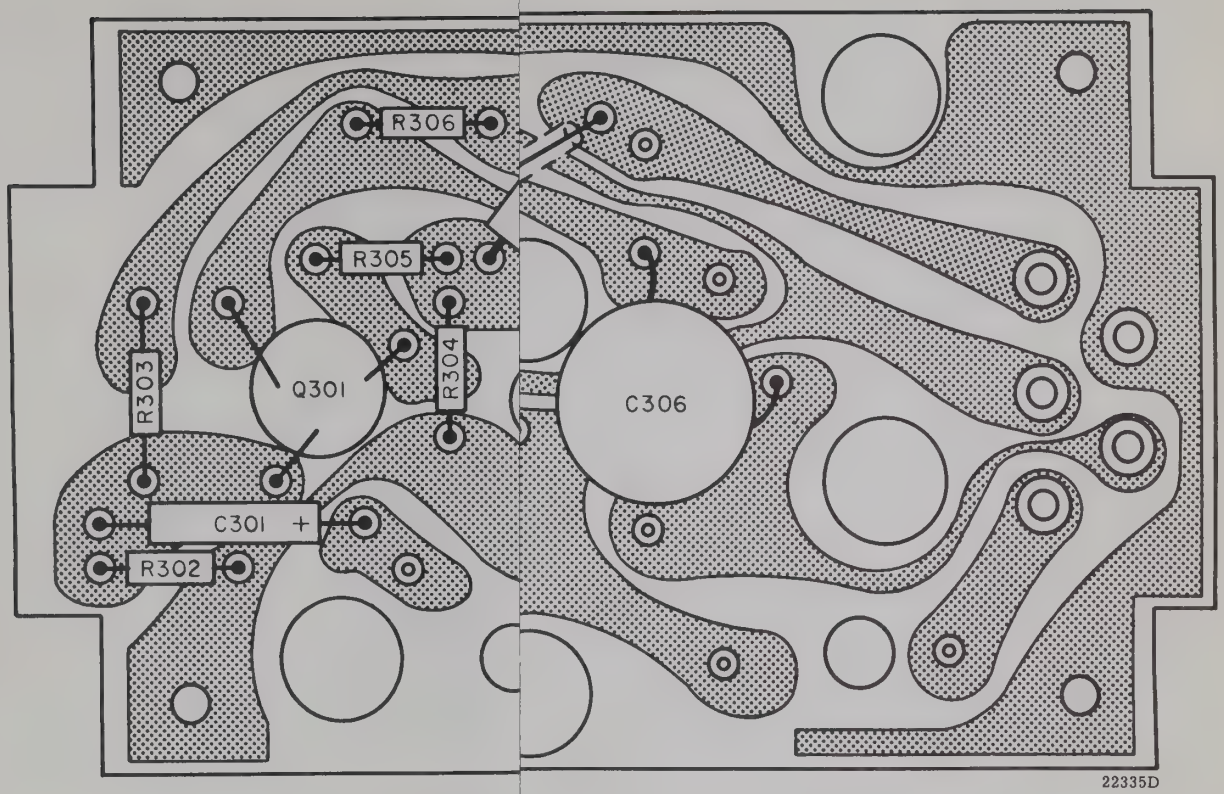


NOTES:

1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE ASSOCIATED WIRING DIAGRAM, FIGURE 4-2.
3. FOR ADDITIONAL WIRING OF PRINTED-CIRCUIT ASSEMBLY, SEE ASSOCIATED WIRING DIAGRAM, FIGURE 4-4.
4. WIRES MARKED WITH COLOR NOTE ARE #22 STRANDED COPPER, TEFLON INSULATION.
5. WIRES MARKED WITH COLOR NOTE AND AN ASTERISK (*) ARE #24 STRANDED COPPER, TEFLON INSULATION.

22336C

Figure 4-3. Modulator Assembly, Wiring Diagram

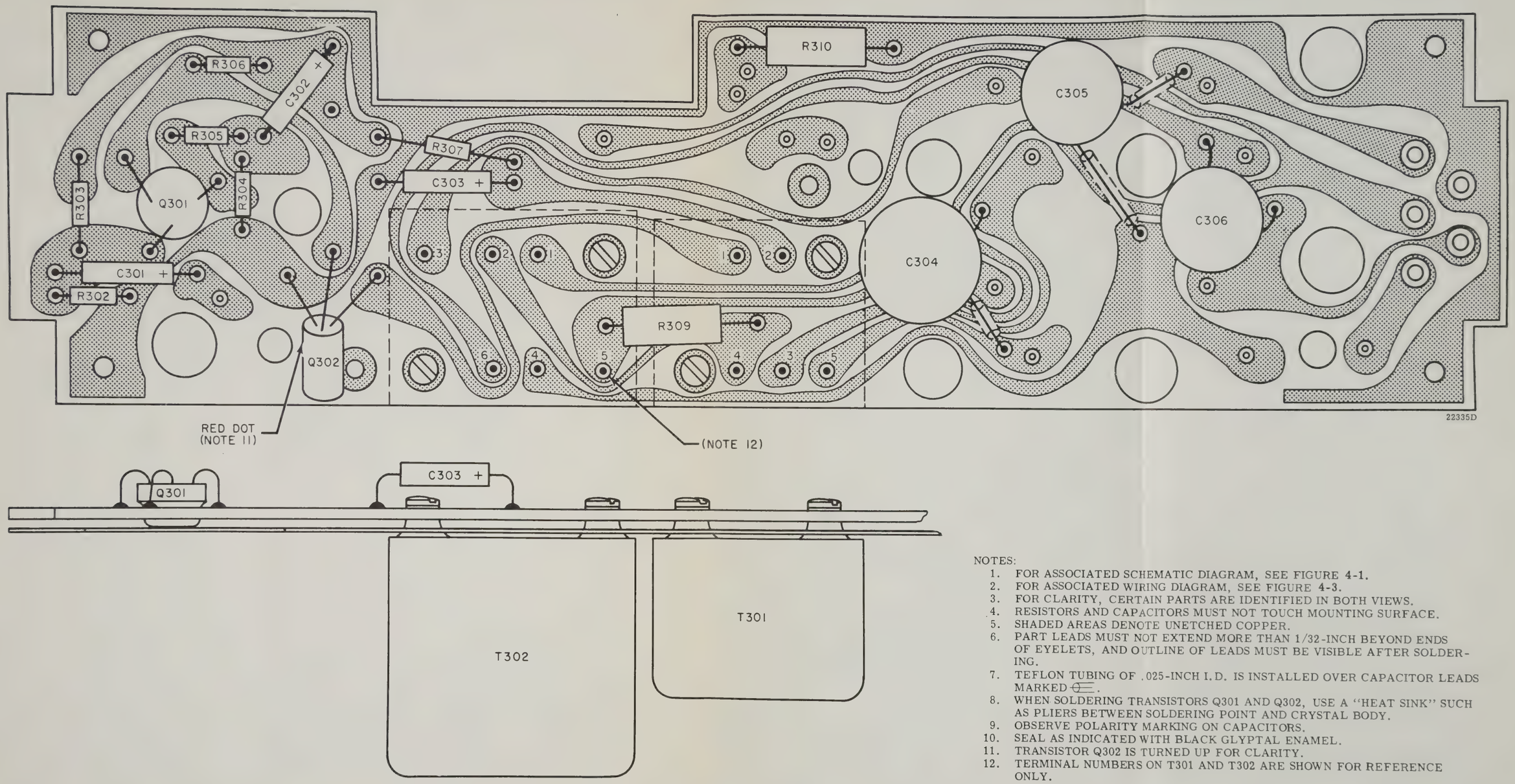


HEMATIC DIAGRAM, SEE FIGURE 4-1.
RING DIAGRAM, SEE FIGURE 4-3.
AIN PARTS ARE IDENTIFIED IN BOTH VIEWS.
ACITORS MUST NOT TOUCH MOUNTING SURFACE.
)TE UNETCHED COPPER.
OT EXTEND MORE THAN 1/32-INCH BEYOND ENDS
UTLINE OF LEADS MUST BE VISIBLE AFTER SOLDER-

. 025-INCH I.D. IS INSTALLED OVER CAPACITOR LEADS

ANSISTORS Q301 AND Q302, USE A "HEAT SINK" SUCH
SOLDERING POINT AND CRYSTAL BODY.
MARKING ON CAPACITORS.
WITH BLACK GLYPTAL ENAMEL.
TURNED UP FOR CLARITY.
ON T301 AND T302 ARE SHOWN FOR REFERENCE

Figure 4-4. Modulator Printed-circuit Assembly, Wiring Diagram



NOTES:

1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR ASSOCIATED WIRING DIAGRAM, SEE FIGURE 4-3.
3. FOR CLARITY, CERTAIN PARTS ARE IDENTIFIED IN BOTH VIEWS.
4. RESISTORS AND CAPACITORS MUST NOT TOUCH MOUNTING SURFACE.
5. SHADED AREAS DENOTE UNETCHED COPPER.
6. PART LEADS MUST NOT EXTEND MORE THAN 1/32-INCH BEYOND ENDS OF EYELETS, AND OUTLINE OF LEADS MUST BE VISIBLE AFTER SOLDERING.
7. TEFLON TUBING OF .025-INCH I.D. IS INSTALLED OVER CAPACITOR LEADS MARKED ⊖.
8. WHEN SOLDERING TRANSISTORS Q301 AND Q302, USE A "HEAT SINK" SUCH AS PLIERS BETWEEN SOLDERING POINT AND CRYSTAL BODY.
9. OBSERVE POLARITY MARKING ON CAPACITORS.
10. SEAL AS INDICATED WITH BLACK GLYPTAL ENAMEL.
11. TRANSISTOR Q302 IS TURNED UP FOR CLARITY.
12. TERMINAL NUMBERS ON T301 AND T302 ARE SHOWN FOR REFERENCE ONLY.

Figure 4-4. Modulator Printed-circuit Assembly, Wiring Diagram

NOTES:

1. FOR SCHEMATIC I
2. FOR INTERCONNE
   WIRING DIAGRAM,
   ARE AS FOLLOWS
   TUNER A
   MC OSC
   FRACT I
   R-F AM
   R-F DRI
   R-F POV
3. FOR COMPLETE V
   DUPLICATED IN S
4. WIRES MARKED W
   SULATION.
5. UNMARKED WIRE
   MARKED WITH SI
6. FOR 14-VOLT ASS
   WIRES MARKED (
7. FOR 28-VOLT ASS
   WIRES MARKED (
8. TEFLON TUBING
   "T."
9. TEFLON TUBING
   "TT."

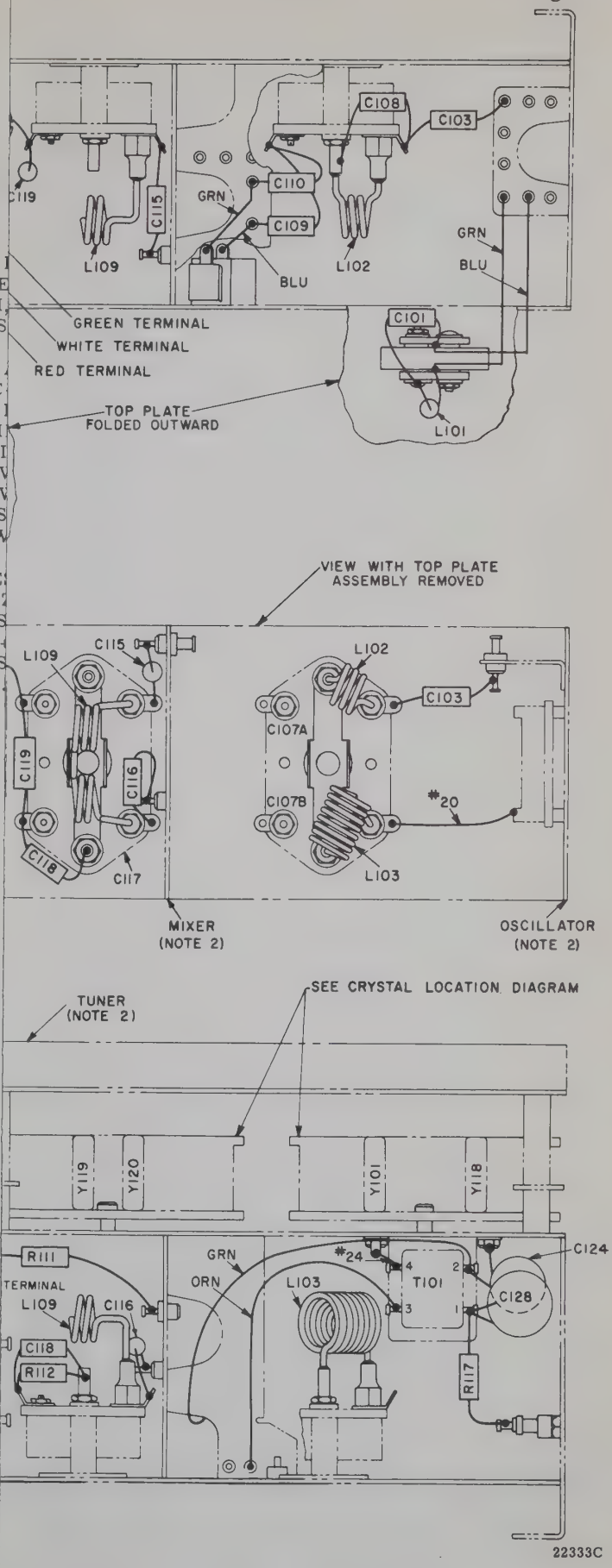


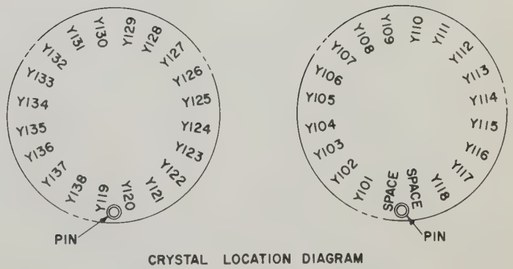
Figure 4-5. Transmitter Assembly, Wiring Diagram

NOTES:

1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE MAIN CHASSIS WIRING DIAGRAM, FIGURE 4-2. ASSOCIATED SUBASSEMBLY WIRING DIAGRAMS ARE AS FOLLOWS:

SUBASSEMBLY	FIGURE NO.
TUNER ASSEMBLY	4-6
MC OSC-DOUBLER	4-7
FRACT MC OSC-MIXER & TONE OSC	4-8
R-F AMPLIFIER	4-9
R-F DRIVER AMPLIFIER	4-10
R-F POWER AMPLIFIER	4-11

3. FOR COMPLETE WIRING, SEE ALL VIEWS. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED IN SOME VIEWS.
4. WIRES MARKED WITH COLOR NOTE ARE #24 SOLID COPPER, TEFLON INSULATION.
5. UNMARKED WIRES ARE #18 BARE, SOLID, TINNED COPPER, EXCEPT THOSE MARKED WITH SIZE AS SHOWN.
6. FOR 14-VOLT ASSEMBLY, WIRES MARKED (. . . .) ARE CONNECTED AND WIRES MARKED (+ + + +) ARE OMITTED.
7. FOR 28-VOLT ASSEMBLY, WIRES MARKED (+ + + +) ARE CONNECTED AND WIRES MARKED (. . . .) ARE OMITTED.
8. TEFLON TUBING OF .032-INCH I.D. IS INSTALLED OVER WIRES MARKED "T."
9. TEFLON TUBING OF .064-INCH I.D. IS INSTALLED OVER WIRES MARKED "TT."



CRYSTAL LOCATION DIAGRAM
(TOP VIEW)

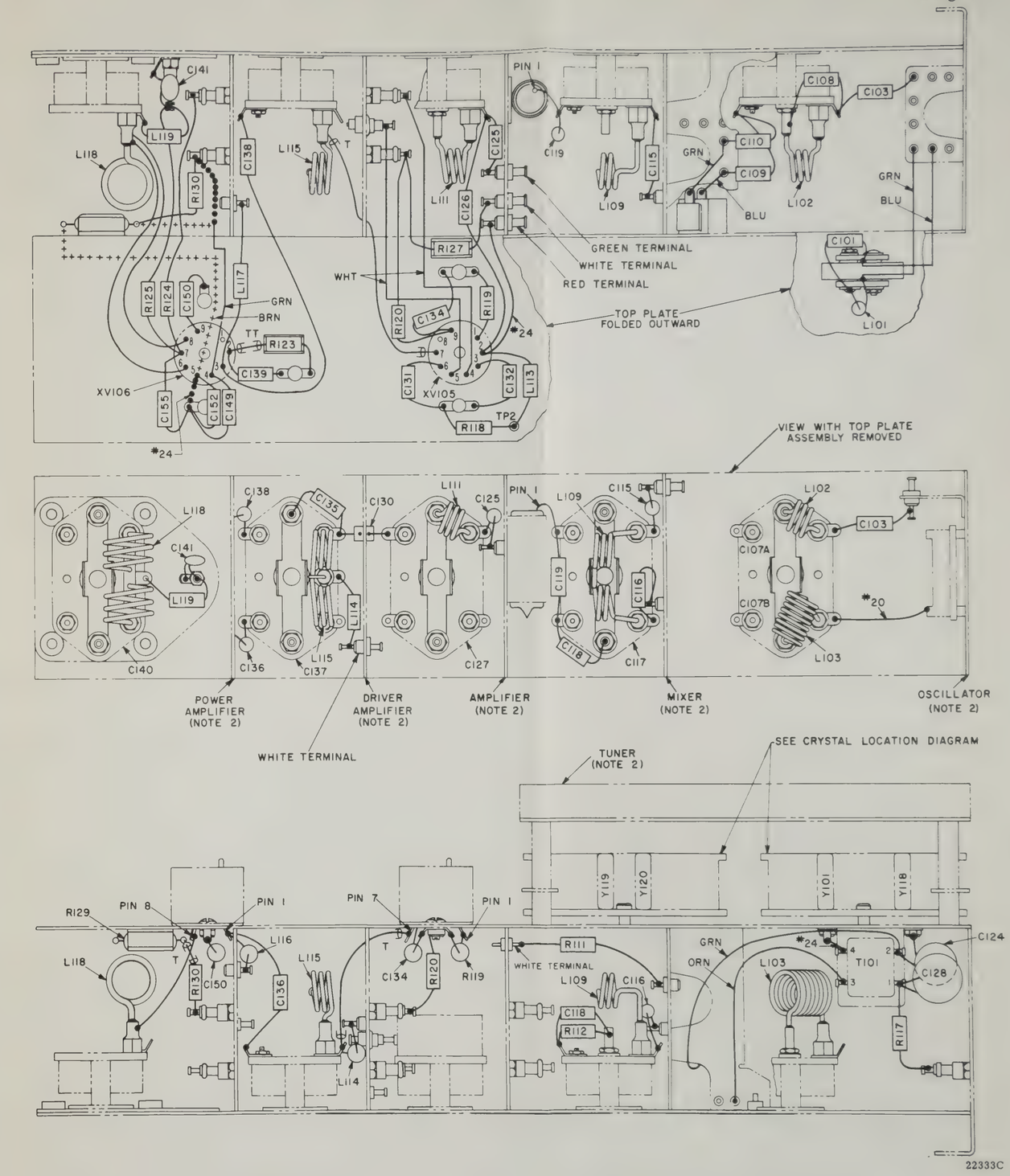
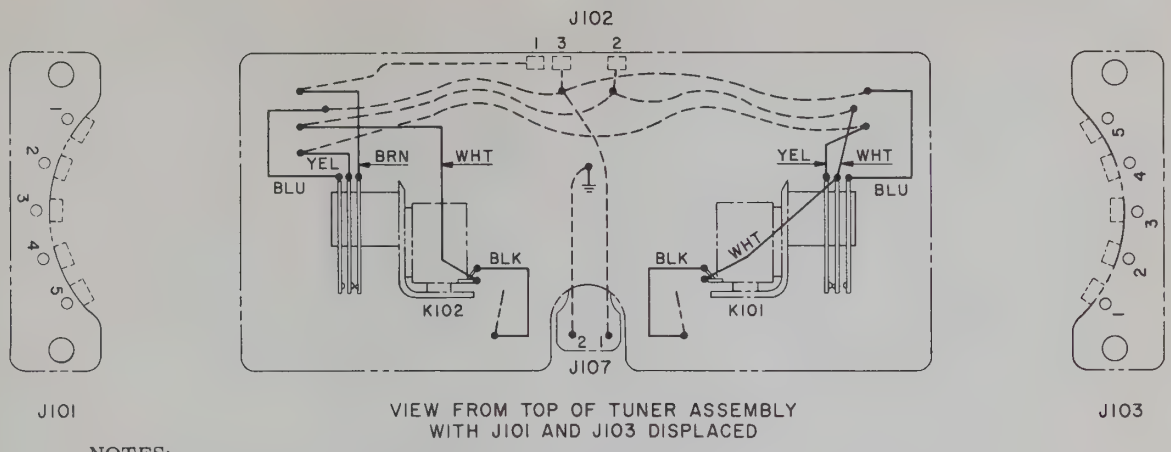


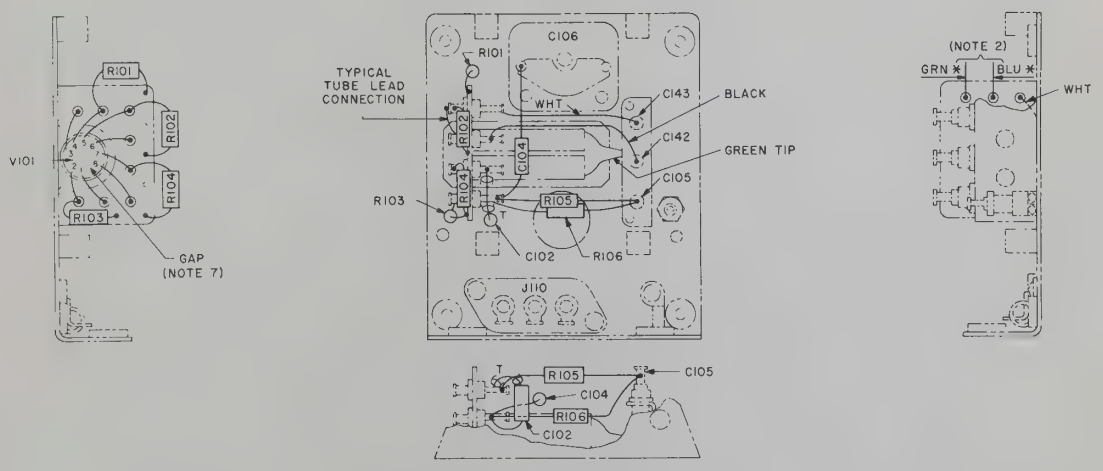
Figure 4-5. Transmitter Assembly, Wiring Diagram



NOTES:
1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE ASSOCIATED WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. DOTTED LINES INDICATE PRINTED WIRING.
4. WIRES ARE #24 SOLID COPPER, TEFLON INSULATION.

22368B

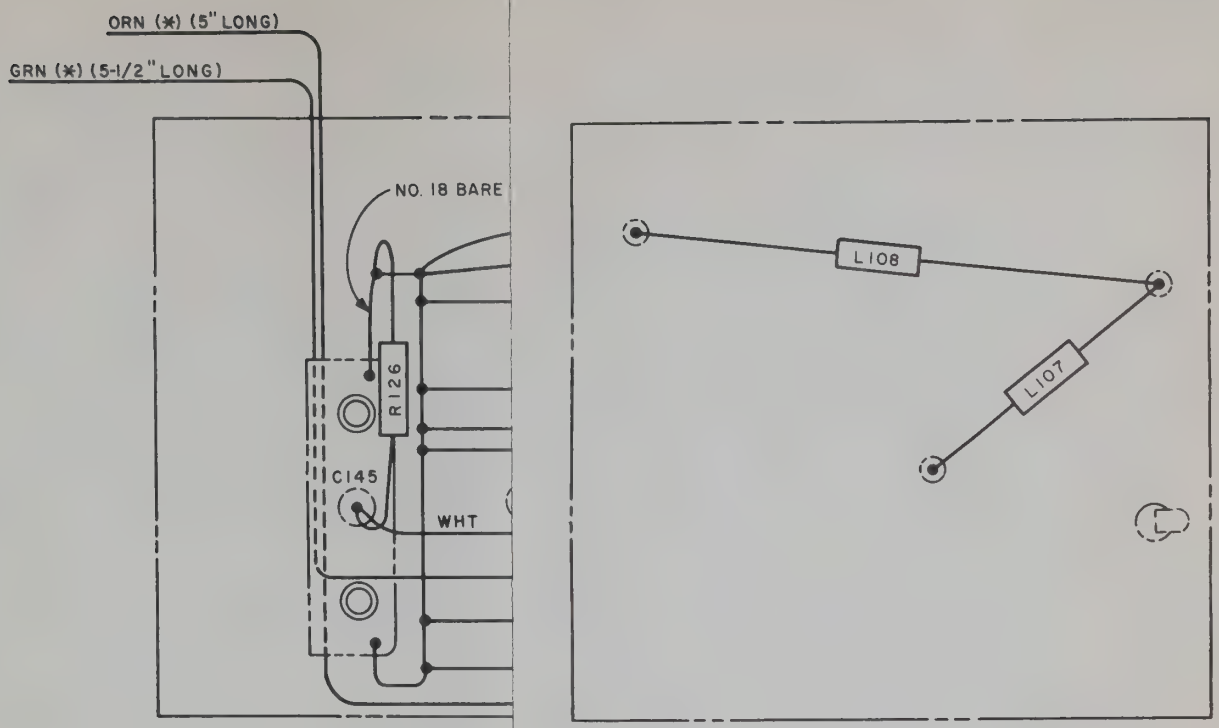
Figure 4-6. Tuner Assembly, Wiring Diagram

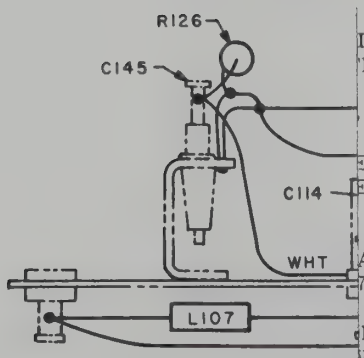


NOTES:
1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE ASSOCIATED WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR COMPLETE WIRING, SEE ALL VIEWS.
4. WIRES MARKED WITH COLOR NOTE ARE #24 SOLID COPPER, TEFLON INSULATION.
5. WIRES MARKED WITH COLOR NOTE AND AN ASTERISK (*) ARE #24 STRANDED COPPER, TEFLON INSULATION.
6. UNMARKED WIRES ARE #24 BARE, SOLID, TINNED COPPER.
7. ELECTRON TUBE V101 IS VIEWED TOWARD BASE ON LEFT VIEW. ORIENT TUBE IN CLIP AS SHOWN.
8. BARE TUBE LEADS ARE DRESSED WITH 1/16-INCH MINIMUM CLEARANCE.
9. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED IN SOME VIEWS.
10. TEFLON TUBING OF .025-INCH I.D. IS INSTALLED OVER WIRE MARKED "T."

22242B

Figure 4-7. Megacycle Oscillator, Wiring Diagram





IGURE 4-1.
'HER ASSEMBLIES, SEE ASSOCIATED WIRING DIAGRAMS,

VIEWS. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED

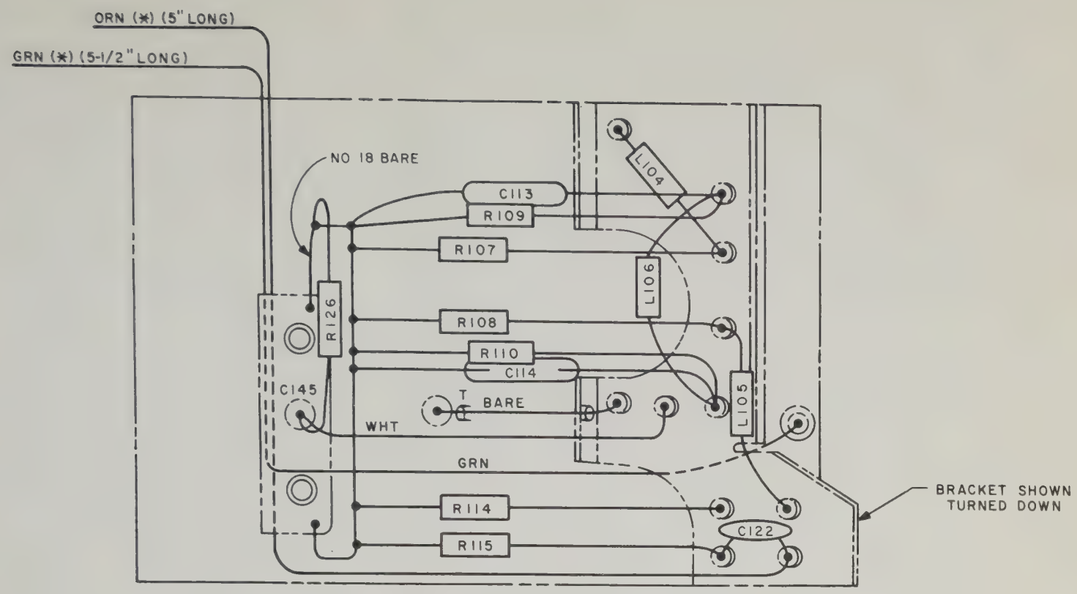
E ARE #24 SOLID COPPER, TEFLON INSULATION.
E AND AN ASTERISK (*) ARE #24 STRANDED COPPER,

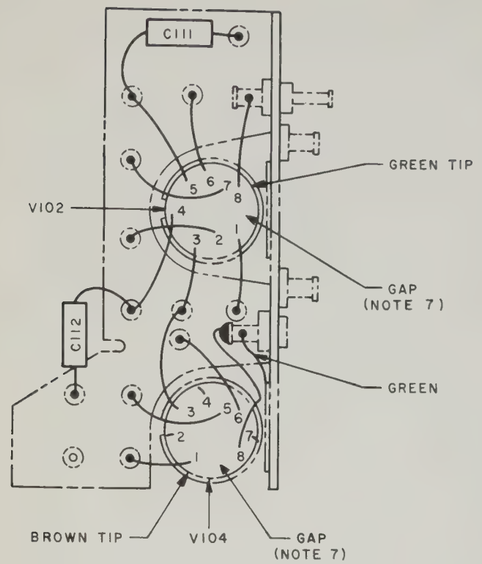
SOLID, TINNED COPPER, UNLESS OTHERWISE SPECIFIED.
ARE VIEWED TOWARD BASE IN END VIEW.
7 ON V104 ARE CUT OFF APPROXIMATELY 1/32 INCH

ITH TEFLON TUBING OF .025-INCH I.D.
WITH 1/16-INCH MINIMUM CLEARANCE.

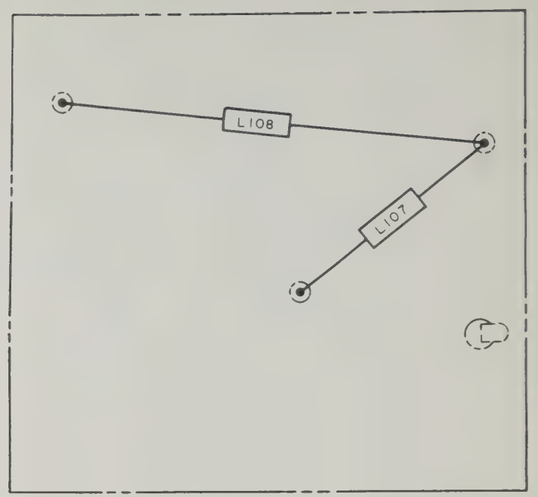
22323B

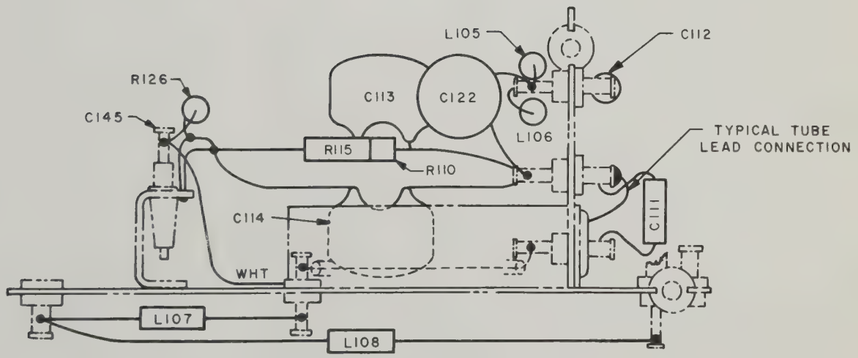
Figure 4-8. Fractional Megacycle Oscillator-Mixer, Wiring Diagram





END VIEW



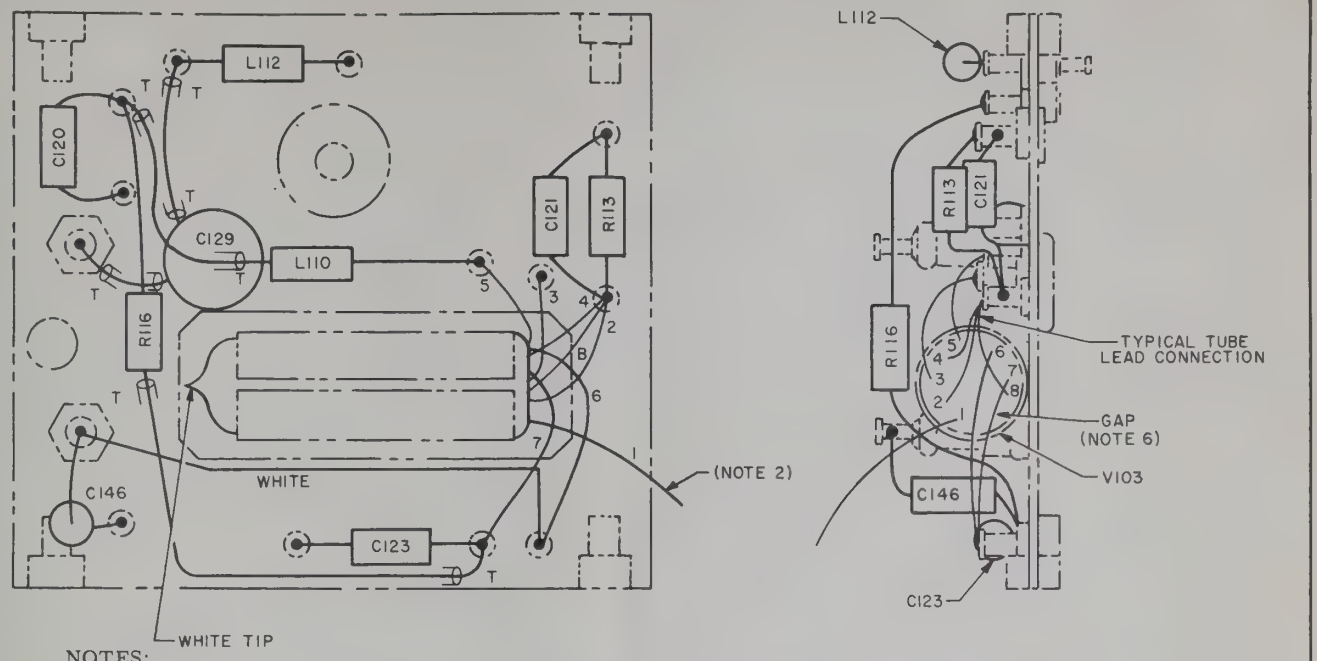


NOTES:

1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE ASSOCIATED WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR COMPLETE WIRING, SEE ALL VIEWS. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED IN SOME VIEWS.
4. WIRES MARKED WITH COLOR NOTE ARE #24 SOLID COPPER, TEFLON INSULATION.
5. WIRES MARKED WITH COLOR NOTE AND AN ASTERISK (*) ARE #24 STRANDED COPPER, TEFLON INSULATION.
6. UNMARKED WIRES ARE #24 BARE, SOLID, TINNED COPPER, UNLESS OTHERWISE SPECIFIED.
7. ELECTRON TUBES V102 AND V104 ARE VIEWED TOWARD BASE IN END VIEW.
8. UNUSED TUBE LEADS NO. 2, 4, & 7 ON V104 ARE CUT OFF APPROXIMATELY 1/32 INCH FROM GLASS.
9. WIRE MARKED "T" IS COVERED WITH TEFLON TUBING OF .025-INCH I.D.
10. BARE TUBE LEADS ARE DRESSED WITH 1/16-INCH MINIMUM CLEARANCE.

22323B

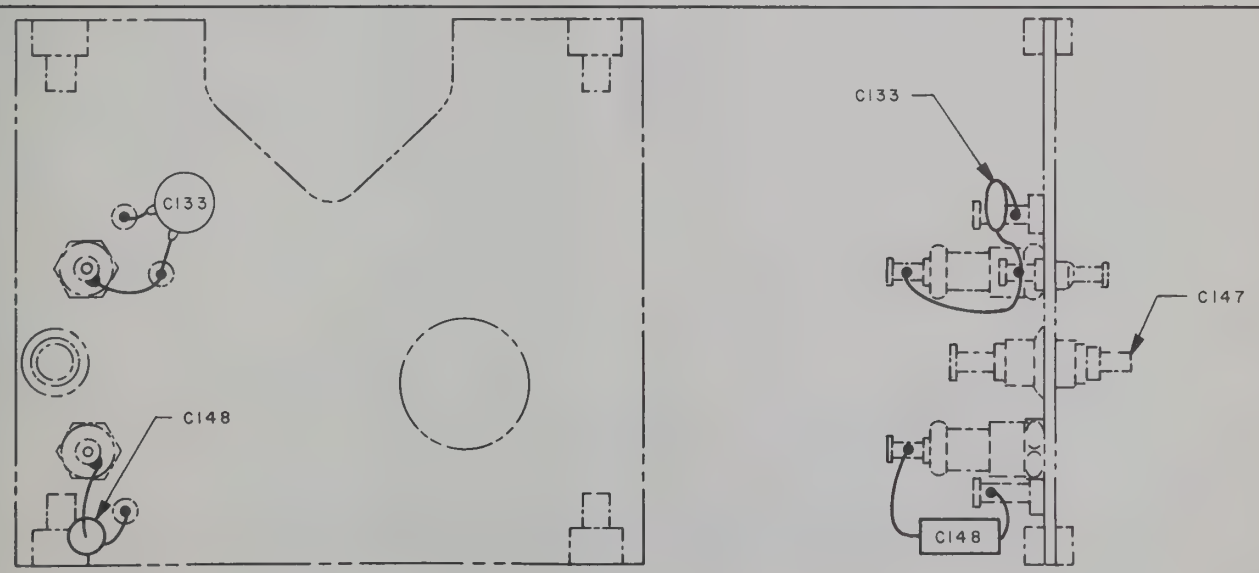
Figure 4-8. Fractional Megacycle Oscillator-Mixer, Wiring Diagram



NOTES:
1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR CLARITY, CERTAIN PARTS ARE IDENTIFIED IN BOTH VIEWS.
4. WIRES MARKED WITH COLOR NOTE ARE #24 SOLID COPPER, TEFLON INSULATION.
5. BARE TUBE LEADS ARE DRESSED WITH 1/16-INCH MINIMUM CLEARANCE.
6. ELECTRON TUBE V103 IS VIEWED TOWARD BASE IN END VIEW. ORIENT TUBE IN CLIP AS SHOWN.
7. TEFLON TUBING OF .025-INCH I.D. IS INSTALLED OVER WIRES MARKED "T."

22316B

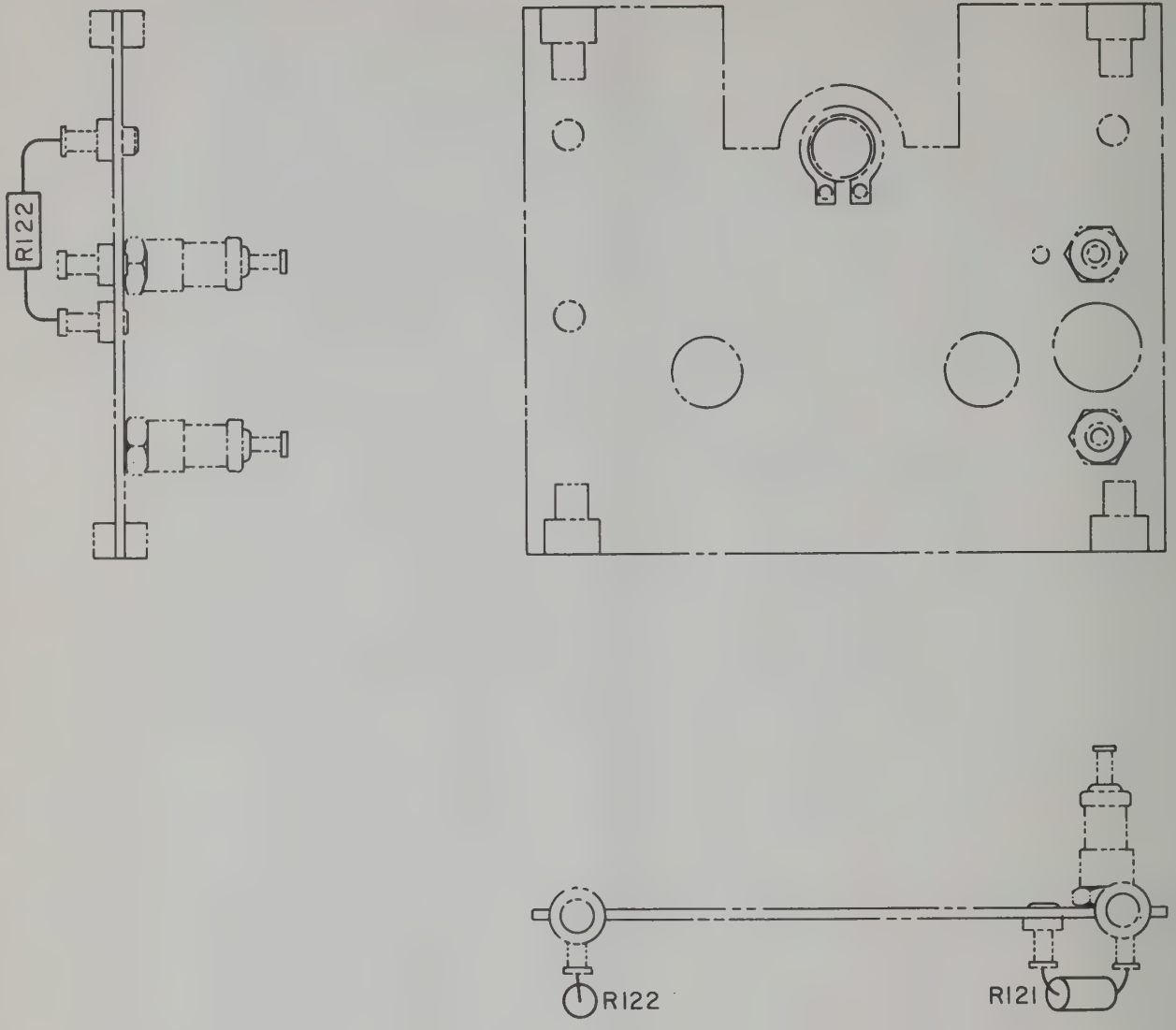
Figure 4-9. R-f Amplifier, Wiring Diagram



NOTES:
1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR CLARITY, CERTAIN PARTS ARE IDENTIFIED IN BOTH VIEWS.
4. UNMARKED WIRES ARE #24 BARE, SOLID, TINNED COPPER.

22319B

Figure 4-10. R-f Driver Amplifier, Wiring Diagram

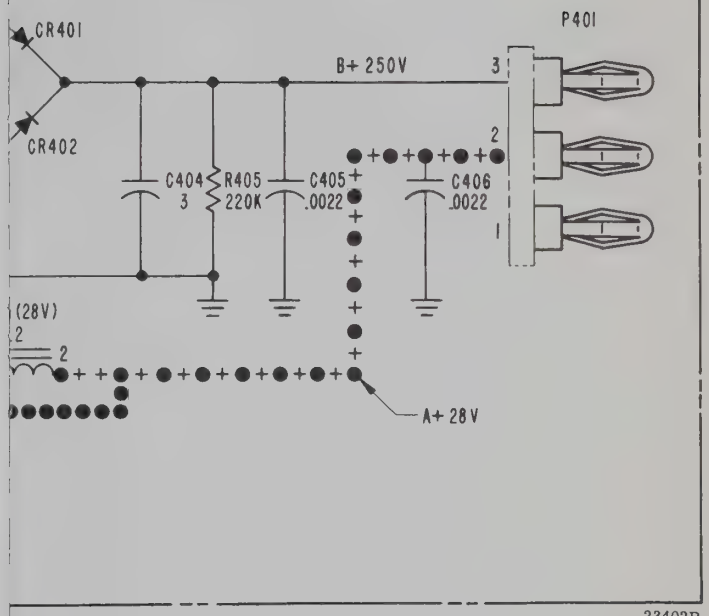


NOTES:

1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED IN SOME VIEWS.

22318A

Figure 4-11. R-f Power Amplifier, Wiring Diagram



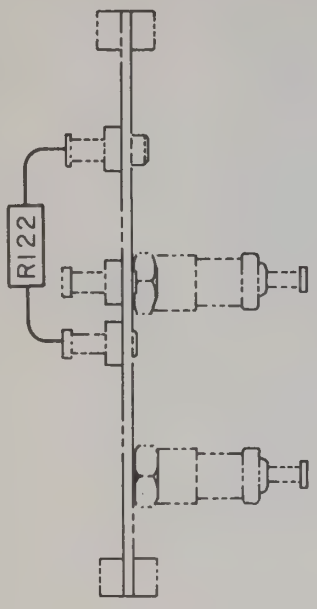
).

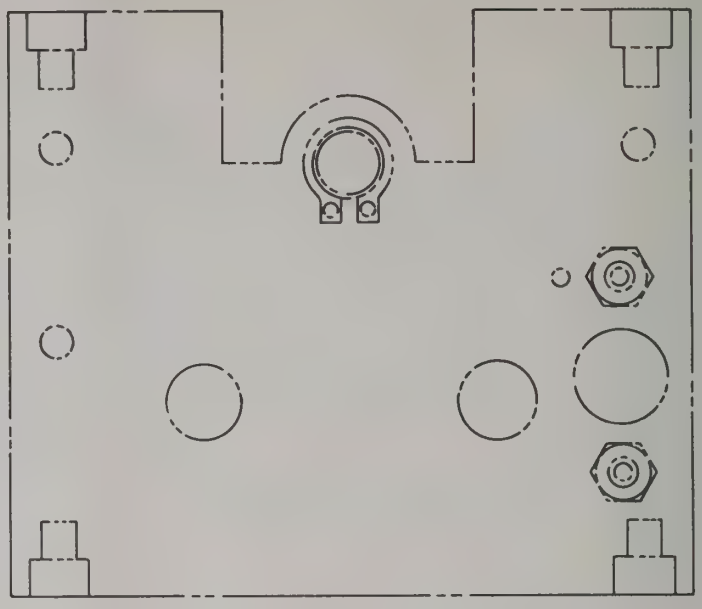
K=1, 000.

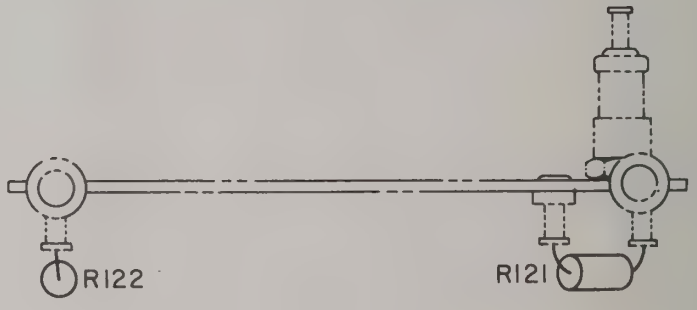
NNECTED AND WIRES MARKED

CONNECTED AND WIRE MARKED

Figure 4-12. DV-12A Dynaverter, Schematic Diagram







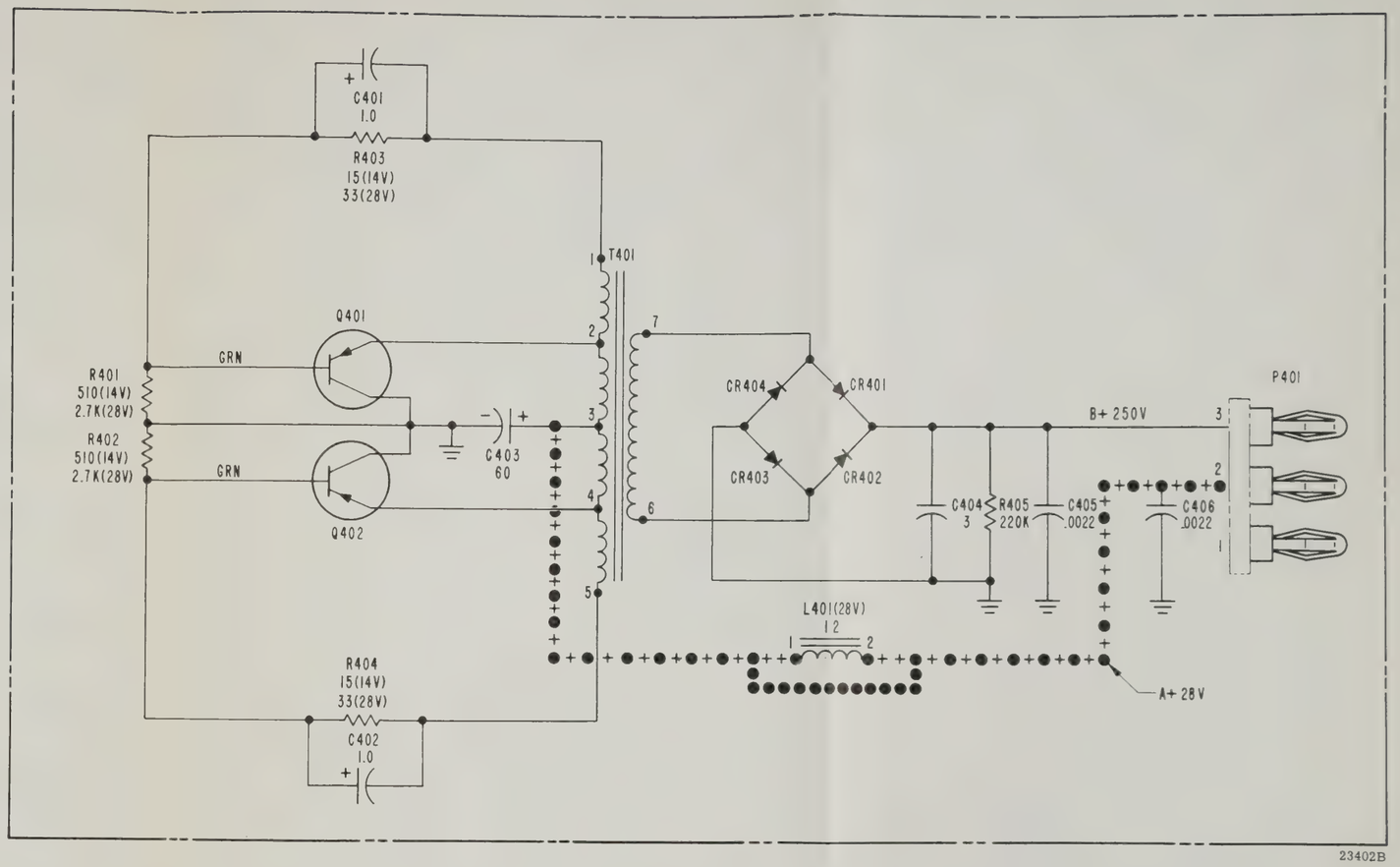
NOTES:

1. FOR ASSOCIATED SCHEMATIC DIAGRAM, SEE FIGURE 4-1.
2. FOR INTERCONNECTIONS WITH OTHER ASSEMBLIES, SEE WIRING DIAGRAMS, FIGURES 4-2 AND 4-5.
3. FOR CLARITY, CERTAIN PARTS ARE DUPLICATED IN SOME VIEWS.

22318A

Figure 4-11. R-f Power Amplifier, Wiring Diagram

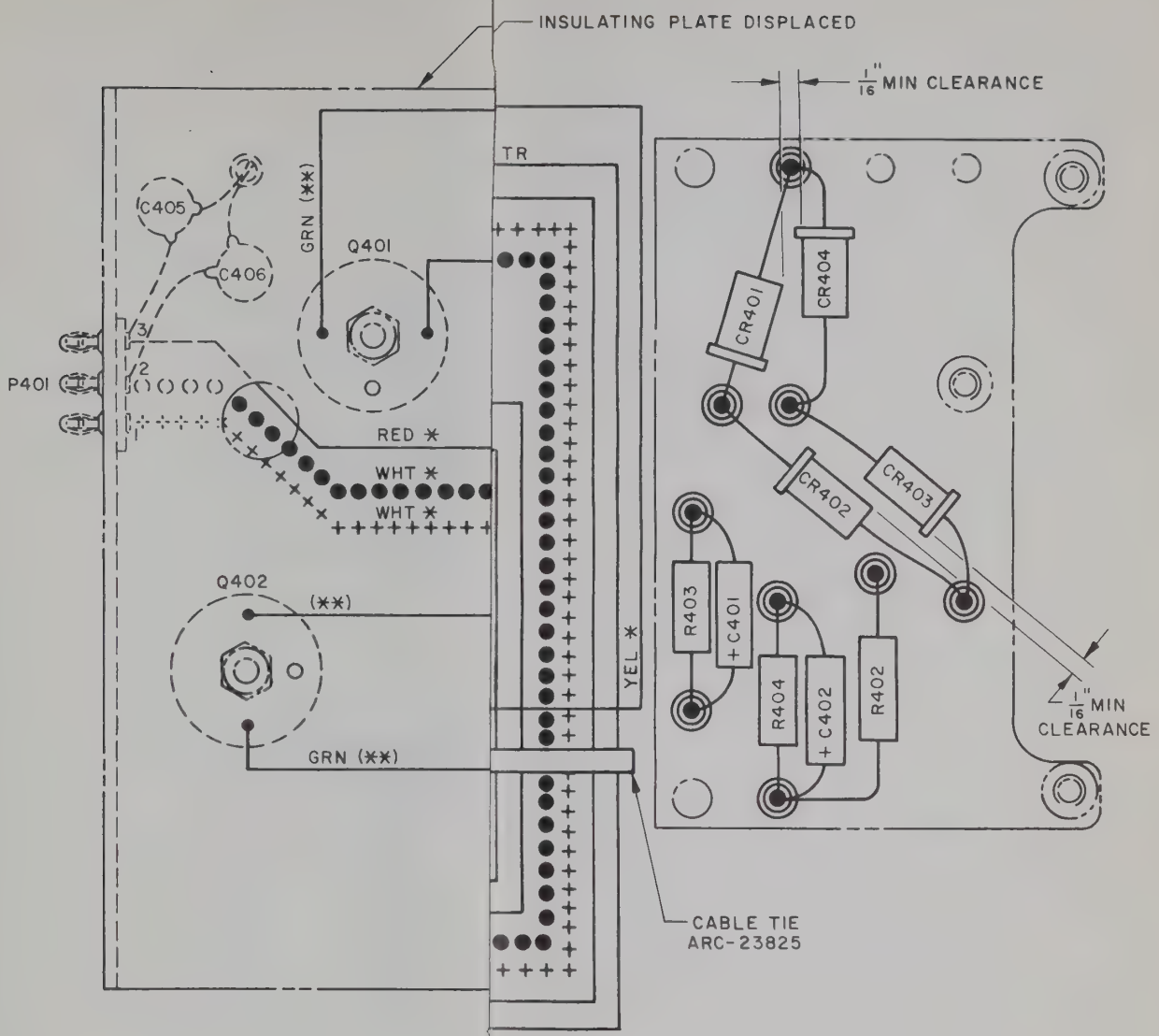
Ref Desig	ARC Part No.
C401	21485-9101
C402	21485-9101
C403	23943
C404	7582
CR401	20474
CR402	20474
CR403	20474
CR404	20474
L401	21429
P401	p/o 23540
Q401	20454
Q401	21153
Q402	20454
Q402	21153
R401	202-0272
R401	202-0511
R402	202-0272
R402	202-0511
R403	201-0330
R403	201-0150
R404	201-0330
R404	201-0150
R405	201-0224
T401	20424
T401	21155



NOTES:

1. FOR WIRING DIAGRAM, SEE FIGURE 4-13.
2. CAPACITANCE VALUES ARE IN MICROFARADS (μF).
3. RESISTANCE VALUES ARE IN OHMS. MULTIPLIER K=1,000.
4. INDUCTANCE VALUE IS IN MILLIHENRIES (MH).
5. FOR 14-VOLT UNIT, WIRE MARKED (. . . .) IS CONNECTED AND WIRES MARKED (+ + + +) ARE OMITTED.
6. FOR 28-VOLT UNIT, WIRES MARKED (+ + + +) ARE CONNECTED AND WIRE MARKED (. . . .) IS OMITTED.

Figure 4-12. DV-12A Dynaverter, Schematic Diagram

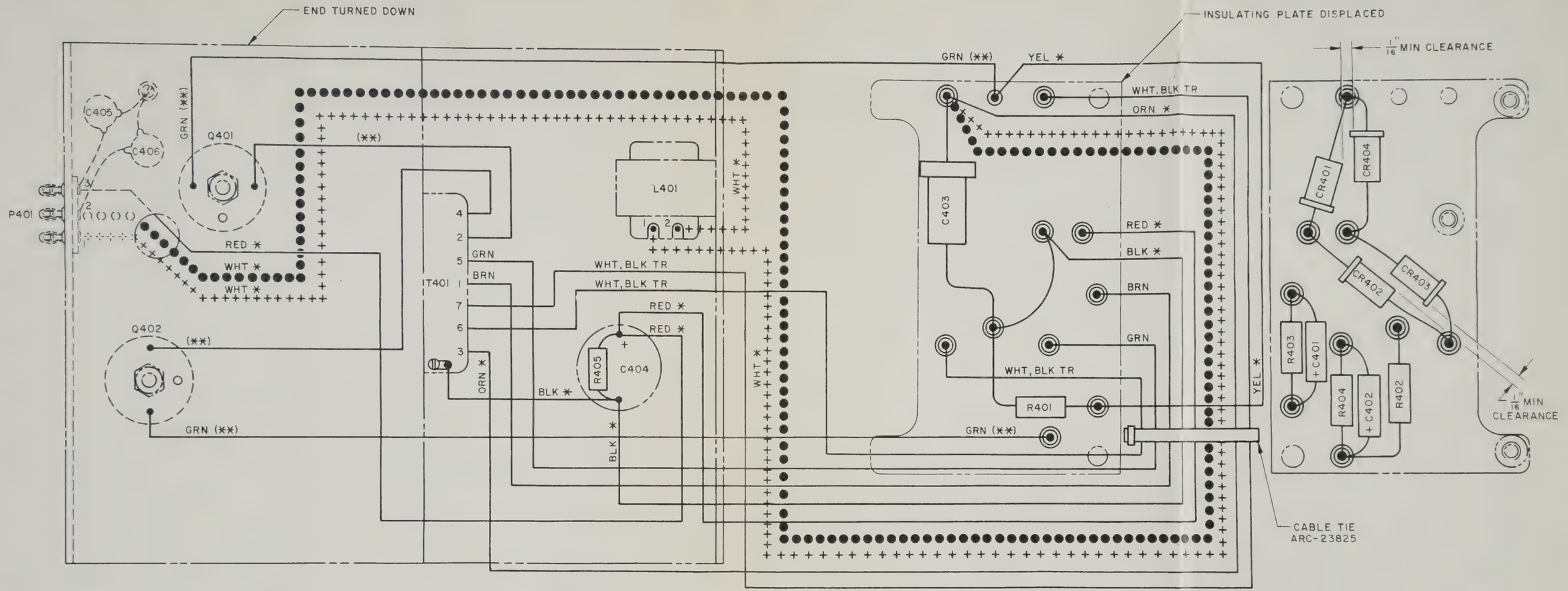


NOTES:

1. FOR SCHEMATIC DIAGRAM, SE
2. WIRES MARKED WITH COLOR I SULATION.
3. WIRES MARKED WITH COLOR I COPPER, TEFLON INSULATIO
4. UNMARKED WIRE IS #24 BARE,
5. WIRES MARKED WITH A DOUBL THOSE WITHOUT COLOR NOTE
6. FOR 14-VOLT UNIT, WIRE MA (+ + + +) ARE OMITTED.
7. FOR 28-VOLT UNIT, WIRES MA (. . . .) IS OMITTED.

23401B

Figure 4-13. DV-12A Dynaverter, Wiring Diagram



NOTES:

1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-12.
2. WIRES MARKED WITH COLOR NOTE ARE #24 STRANDED COPPER, TEFLON INSULATION.
3. WIRES MARKED WITH COLOR NOTE AND AN ASTERISK (*) ARE #22 STRANDED COPPER, TEFLON INSULATION
4. UNMARKED WIRE IS #24 BARE, SOLID, TINNED COPPER.
5. WIRES MARKED WITH A DOUBLE ASTERISK (**) ARE FURNISHED WITH TRANSISTORS. THOSE WITHOUT COLOR NOTE VARY IN COLOR.
6. FOR 14-VOLT UNIT, WIRE MARKED (. . . .) IS CONNECTED AND WIRES MARKED (+ + + +) ARE OMITTED.
7. FOR 28-VOLT UNIT, WIRES MARKED (+ + + +) ARE CONNECTED AND WIRE MARKED (. . . .) IS OMITTED.

23401B

Figure 4-13. DV-12A Dynaverter, Wiring Diagram

NOTES:

1. FOR WIRING DIAGRAM, SI
2. SWITCH SECTIONS S201A A
   IDENTIFICATION OF SWIT
3. S201A CONTROLS TERMIN
   N, O, P, Q, R. AT EACH PO
   EACH GROUP ARE GROUN
   CONNECTED TOGETHER
4. TERMINALS H, I, J, K & L
   SWITCH. SEE TABLE 1.

TABLE 1. TABULAT

S201A	SCS OPERATION GROUP A, B, C, D, (Note 3)
118	C, E
119	A, D
120	A, B, E
121	B, C
122	C, D
123	D, E
124	E
125	A
126	B
127	C
128	D
129	A, E
130	A, B
131	A, B, C
132	A, B, C, D
133	B, C, D, E
134	A, C, D, E
135	B, D, E

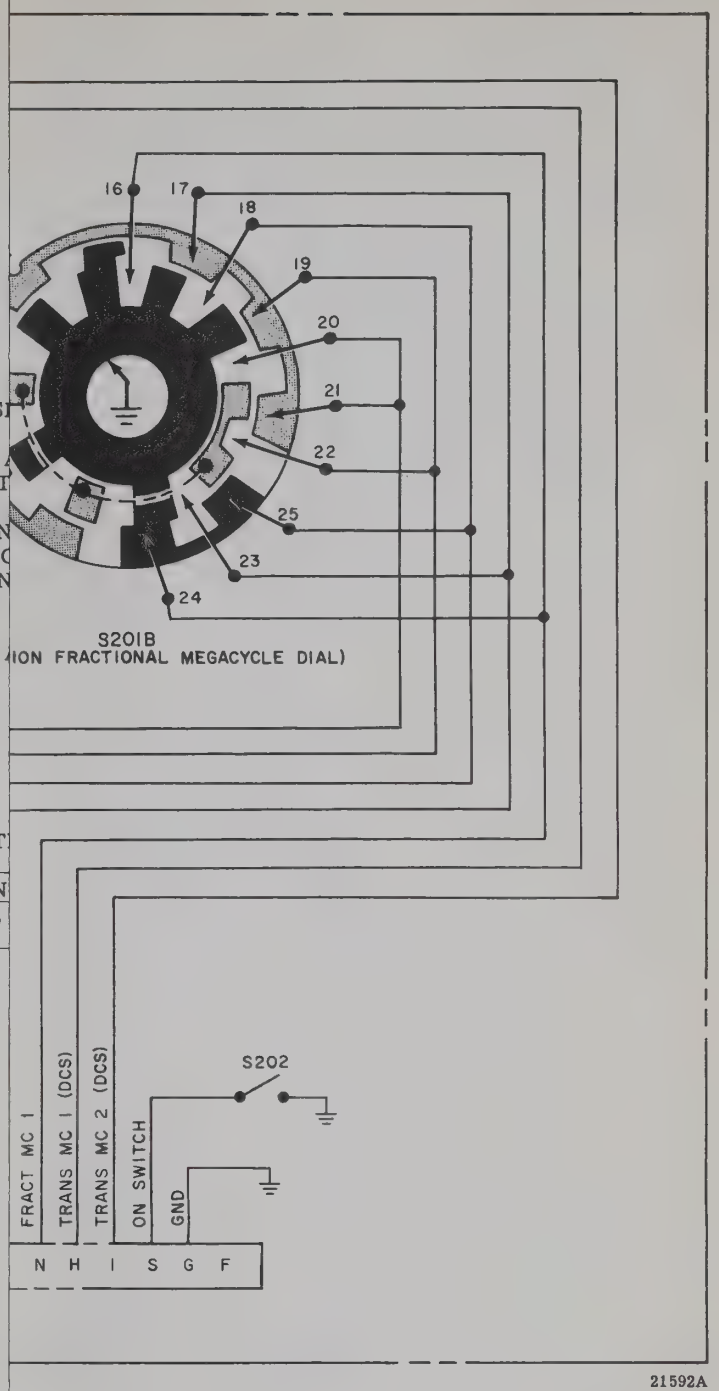


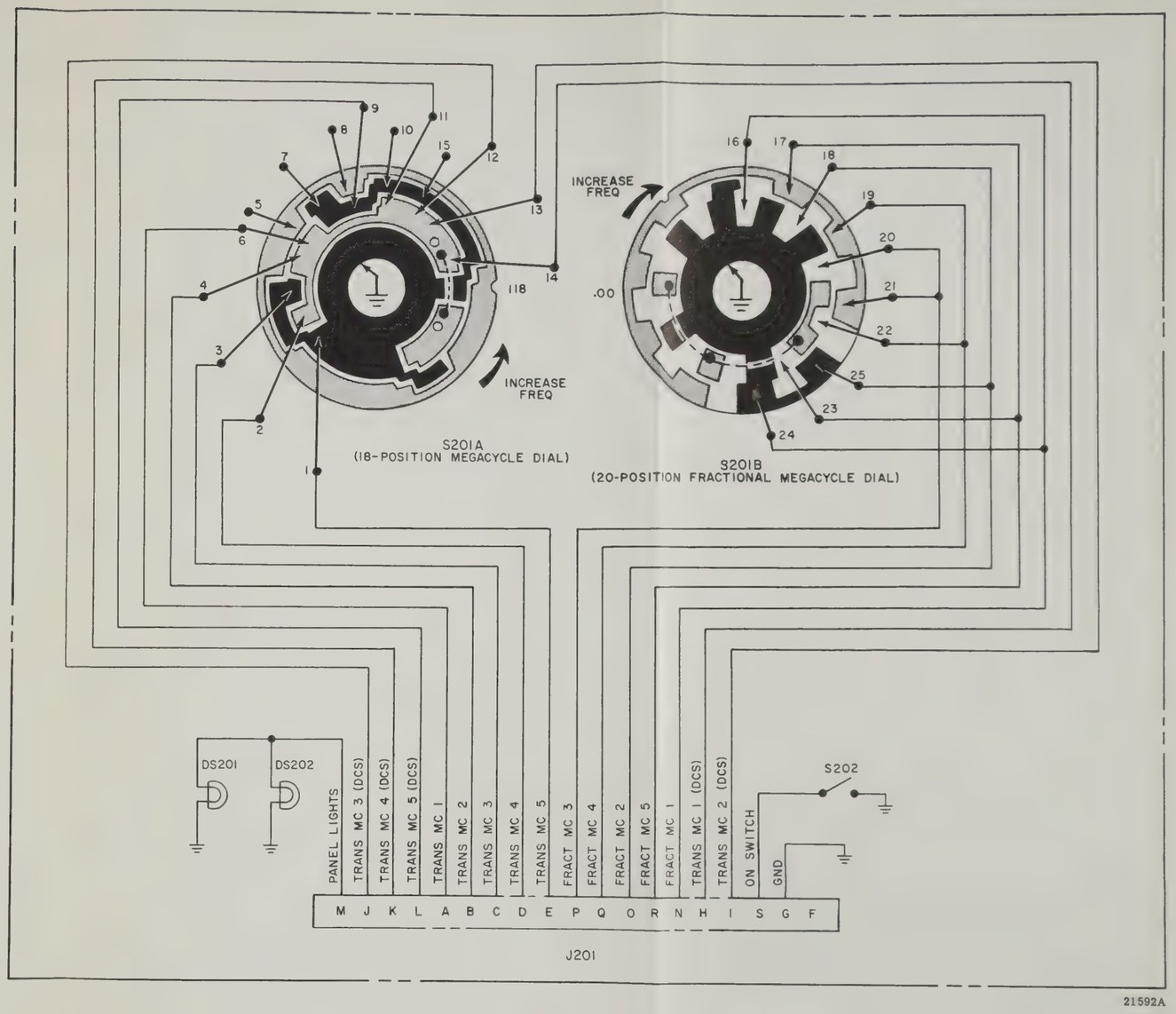
Figure 4-14. C-82A Control Unit, Schematic Diagram

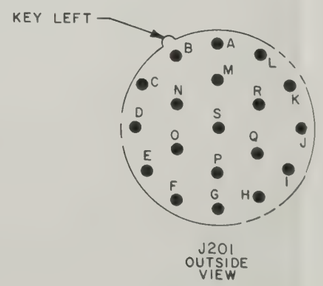
NOTES:

1. FOR WIRING DIAGRAM, SEE FIGURE 4-15.
2. SWITCH SECTIONS S201A AND S201B ARE SHOWN IN 118.00-MC POSITION. FOR IDENTIFICATION OF SWITCH TERMINALS, SEE FIGURE 4-15.
3. S201A CONTROLS TERMINAL GROUP A, B, C, D, E of J201; S201B CONTROLS GROUP N, O, P, Q, R. AT EACH POSITION OF S201A AND S201B, CERTAIN TERMINALS IN EACH GROUP ARE GROUNDED AND THE OTHER TERMINALS OF THE GROUP ARE CONNECTED TOGETHER FREE OF GROUND. SEE TABLE 1.
4. TERMINALS H, I, J, K & L ARE FOR "DCS" OPERATION FROM AN EXTERNAL SWITCH. SEE TABLE 1.

TABLE 1. TABULATION OF GROUNDED TERMINALS IN EACH GROUP

S201A	SCS OPERATION GROUP A, B, C, D, E (Note 3)	DCS OPERATION GROUP H, I, J, K, L (Note 4)	S201B	GROUP N, O, P, Q, R (Note 3)
118	C, E	L	.00	N, O
119	A, D	H	.05	N, O, P
120	A, B, E	I	.10	N, R
121	B, C	J	.15	N, O, P, Q
122	C, D	K	.20	Q
123	D, E	H, L	.25	O, P, Q, R
124	E	H, I	.30	P
125	A	H, I, J	.35	N, P, Q, R
126	B	H, I, J, K	.40	O
127	C	I, J, K, L	.45	O, Q, R
128	D	H, J, K, L	.50	N
129	A, E	I, K, L	.55	N, P, R
130	A, B	J, L	.60	R
131	A, B, C	H, K	.65	O, Q
132	A, B, C, D	H, I, L	.70	Q, R
133	B, C, D, E	I, J	.75	P, R
134	A, C, D, E	J, K	.80	P, Q
135	B, D, E	K, L	.85	N, Q
			.90	O, P
			.95	N, O, R

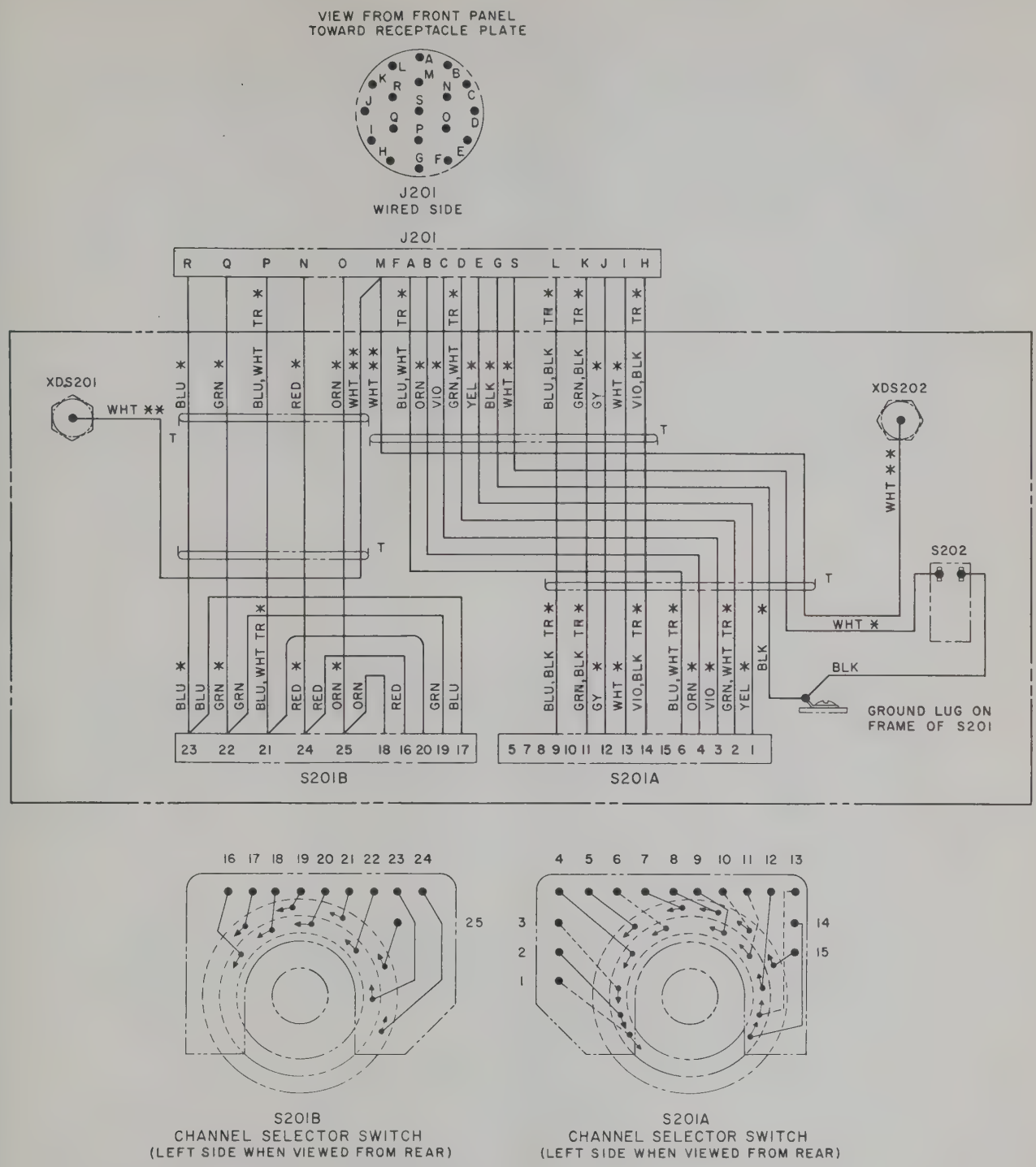




CONNECTED TO GROUND

INSULATED FROM GROUND AND CONNECTED TOGETHER

Figure 4-14. C-82A Control Unit, Schematic Diagram


VIEW FROM FRONT PANEL
TOWARD RECEPTACLE PLATE
J201
WIRED SIDE
J201
R Q P N O M F A B C D E G S L K J I H
XDS201
WHT **
XDS202
WHT **
S202
WHT *
BLK
GROUND LUG ON
FRAME OF S201
BLU * GRN * BLU,WHT TR * RED * ORN * WHT ** WHT ** BLU,WHT TR * ORN * VIO * GRN,WHT TR * YEL * BLK * WHT * BLU,BLK TR * GRN,BLK TR * GY * WHT * VIO,BLK TR *
BLU * BLU GRN * GRN BLU,WHT TR * RED * RED ORN * ORN RED GRN BLU
BLU,BLK TR * GRN,BLK TR * GY * WHT * VIO,BLK TR * BLU,WHT TR * ORN * VIO * GRN,WHT TR * YEL * BLK *
23 22 21 24 25 18 16 20 19 17
5 7 8 9 10 11 12 13 14 15 6 4 3 2 1
S201B
S201A
16 17 18 19 20 21 22 23 24
25
4 5 6 7 8 9 10 11 12 13
3
2
1
14
15
S201B
CHANNEL SELECTOR SWITCH
(LEFT SIDE WHEN VIEWED FROM REAR)
S201A
CHANNEL SELECTOR SWITCH
(LEFT SIDE WHEN VIEWED FROM REAR)

NOTES:

1. FOR SCHEMATIC DIAGRAM, SEE FIGURE 4-14.
2. WIRES MARKED WITH COLOR NOTE ARE #24 SOLID COPPER, TEFLON INSULATION.
3. WIRES MARKED BY COLOR NOTE AND AN ASTERISK (*) ARE #22 STRANDED COPPER, TEFLON INSULATION.
4. WIRES MARKED BY COLOR NOTE AND A DOUBLE ASTERISK (**) ARE #20 STRANDED COPPER, TEFLON INSULATION.
5. UNMARKED WIRE IS #24 BARE, SOLID, TINNED COPPER.
6. WIRES OR GROUPS OF WIRES MARKED "T" ARE COVERED WITH TRANSPARENT VINYLITE TUBING OF APPROPRIATE SIZE.

21591A

Figure 4-15. C-82A Control Unit, Wiring Diagram

Switch Position (MC)	MC Cycling-SCS J201 Terminal					MC Cycling-DCS J201 Terminal				
	A	B	C	D	E	H	I	J	K	L
118	†	†	*	†	*	(†)	(†)	(†)	(†)	(*)
119	*	†	†	*	†	(*)	(†)	(†)	(†)	(†)
120	*	*	†	†	*	(†)	(*)	(†)	(†)	(†)
121	†	*	*	†	†	(†)	(†)	(*)	(†)	(†)
122	†	†	*	*	†	(†)	(†)	(†)	(*)	(†)
123	†	†	†	*	*	(*)	(†)	(†)	(†)	(*)
124	†	†	†	†	*	(*)	(*)	(†)	(†)	(†)
125	*	†	†	†	†	(*)	(*)	(*)	(†)	(†)
126	†	*	†	†	†	(*)	(*)	(*)	(*)	(†)
127	†	†	*	†	†	(†)	(*)	(*)	(*)	(*)
128	†	†	†	*	†	(*)	(†)	(*)	(*)	(*)
129	*	†	†	†	*	(†)	(*)	(†)	(*)	(*)
130	*	*	†	†	†	(†)	(†)	(*)	(†)	(*)
131	*	*	*	†	†	(*)	(†)	(†)	(*)	(†)
132	*	*	*	*	†	(*)	(*)	(†)	(†)	(*)
133	†	*	*	*	*	(†)	(*)	(*)	(†)	(†)
134	*	†	*	*	*	(†)	(†)	(*)	(*)	(†)
135	†	*	†	*	*	(†)	(†)	(†)	(*)	(*)

Switch Position (MC)	Fractional MC Cycling J201 Terminal				
	N	O	P	Q	R
.00	*	*	†	†	†
.05	*	*	*	†	†
.10	*	†	†	†	*
.15	*	*	*	*	†
.20	†	†	†	*	†
.25	†	*	*	*	*
.30	†	†	*	†	†
.35	*	†	*	*	*
.40	†	*	†	†	†
.45	†	*	†	*	*
.50	*	†	†	†	†
.55	*	†	*	†	*
.60	†	†	†	†	*
.65	†	*	†	*	†
.70	†	†	†	*	*
.75	†	†	*	†	*
.80	†	†	*	*	†
.85	*	†	†	*	†
.90	†	*	*	†	†
.95	*	*	†	†	*

NOTES:

1. TO CHECK CONTINUITY OF ANY OF THE CHANNEL SELECTOR SWITCH POSITIONS LISTED IN THE TABLE, USE A VOLT-OHMMETER (SIMPSON MODEL 260, OR EQUIVALENT) AND SET THE RANGE SWITCH TO THE R X 1 SCALE SO THAT POSITIVE CONTACT CAN BE DETERMINED. CONNECT ONE LEAD TO GROUND, TERMINAL G OF J201, AND CONNECT THE OTHER LEAD TO EACH OF THE TERMINALS INDICATED. THE CORRECT CONTINUITY FOR THE SWITCH POSITION BEING CHECKED IS GIVEN BY THE FOLLOWING CODE IN WHICH TERMINAL LEADS HAVING THE SAME SYMBOL ARE CONNECTED TO EACH OTHER:

   * = GROUNDED TERMINAL

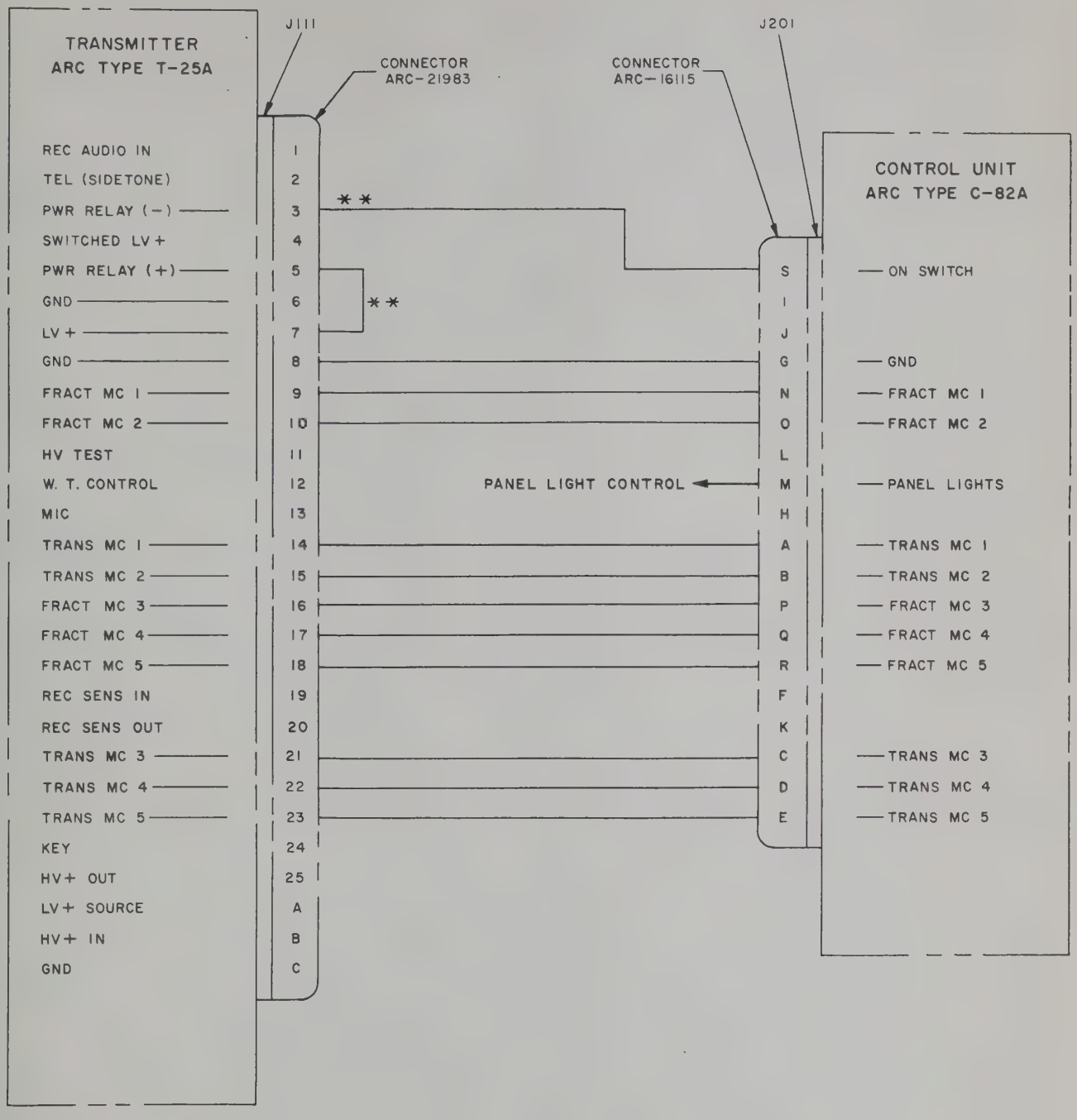
   † = UNGROUNDED TERMINAL AND CONNECTED TO OTHER TERMINALS MARKED †

2. AFTER CHECKING THE CONTINUITY OF EACH TERMINAL TO GROUND, REMOVE THE TEST LEAD FROM GROUND AND CONNECT IT TO ONE OF THE TERMINALS MARKED (†). THEN CHECK CONTINUITY WITH ALL OTHER TERMINALS MARKED (†) TO INSURE THAT THEY ARE CONNECTED TOGETHER. FOR EXAMPLE: ASSUMING DCS OPERATION AND THE MEGACYCLE CHANNEL SELECTOR SWITCH SET AT 124 MC, CORRECT CONTINUITY FOR THIS SWITCH POSITION WOULD BE:

TERMINAL OF J201	CORRECT CONTINUITY
H	(*) = GROUNDED
I	(*) = GROUNDED
J	(†) = UNGROUNDED, CONNECTED TO TERMINALS K AND L
K	(†) = UNGROUNDED, CONNECTED TO TERMINALS J AND L
L	(†) = UNGROUNDED, CONNECTED TO TERMINALS J AND K

Figure 4-16. C-82A Control Unit, Continuity Sequence Table

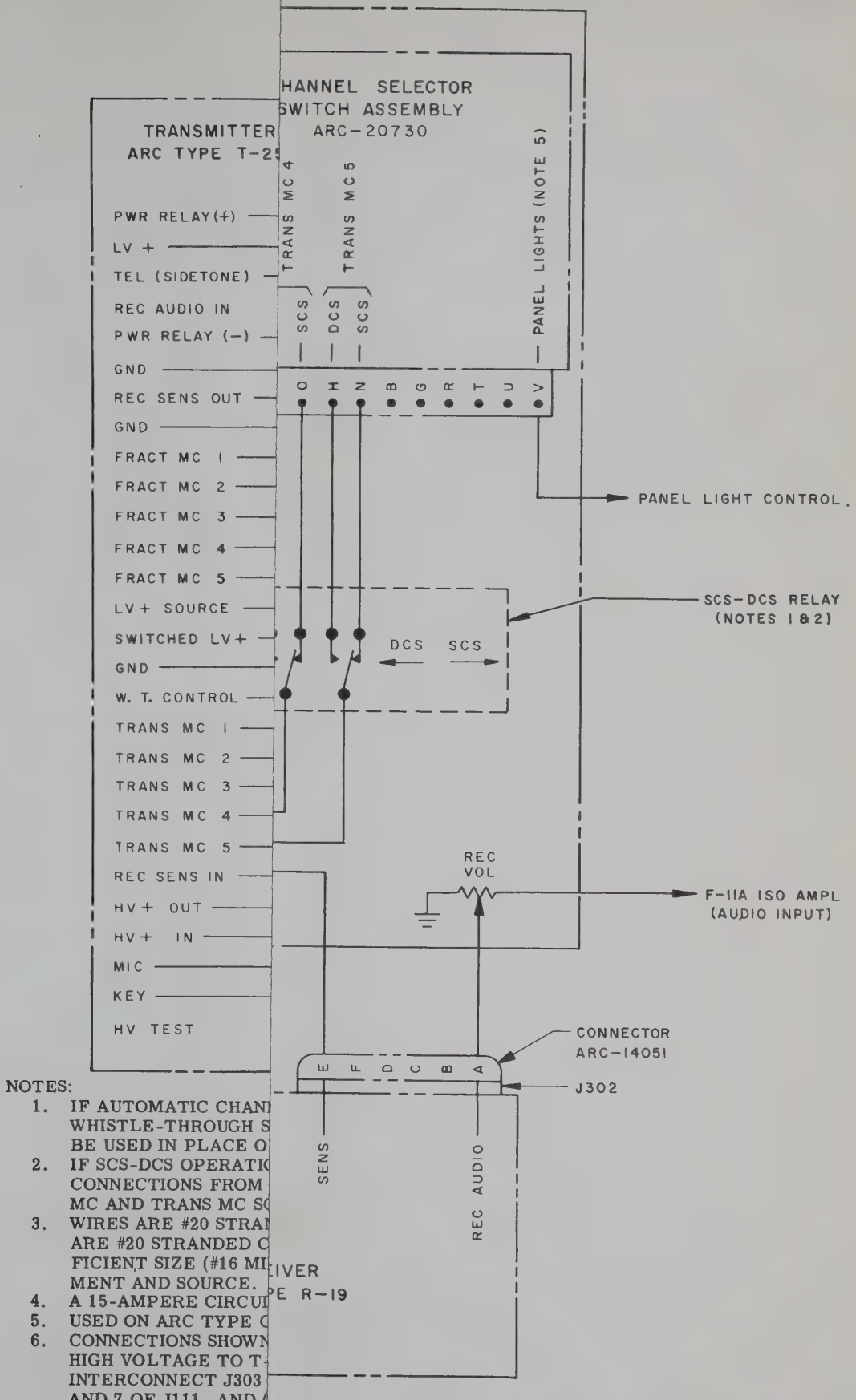
TP1777



NOTE: WIRES ARE #20 STRANDED COPPER, EXCEPT WHERE OTHERWISE NOTED. WIRES MARKED WITH A DOUBLE ASTERISK (**) ARE OF SUFFICIENT SIZE (#16 MINIMUM) TO PROVIDE LESS THAN 0.5-VOLT DROP BETWEEN EQUIPMENT AND SOURCE.

22794A

Figure 4-17. T-25A Transmitter and C-82A Control Unit, Interconnection Diagram

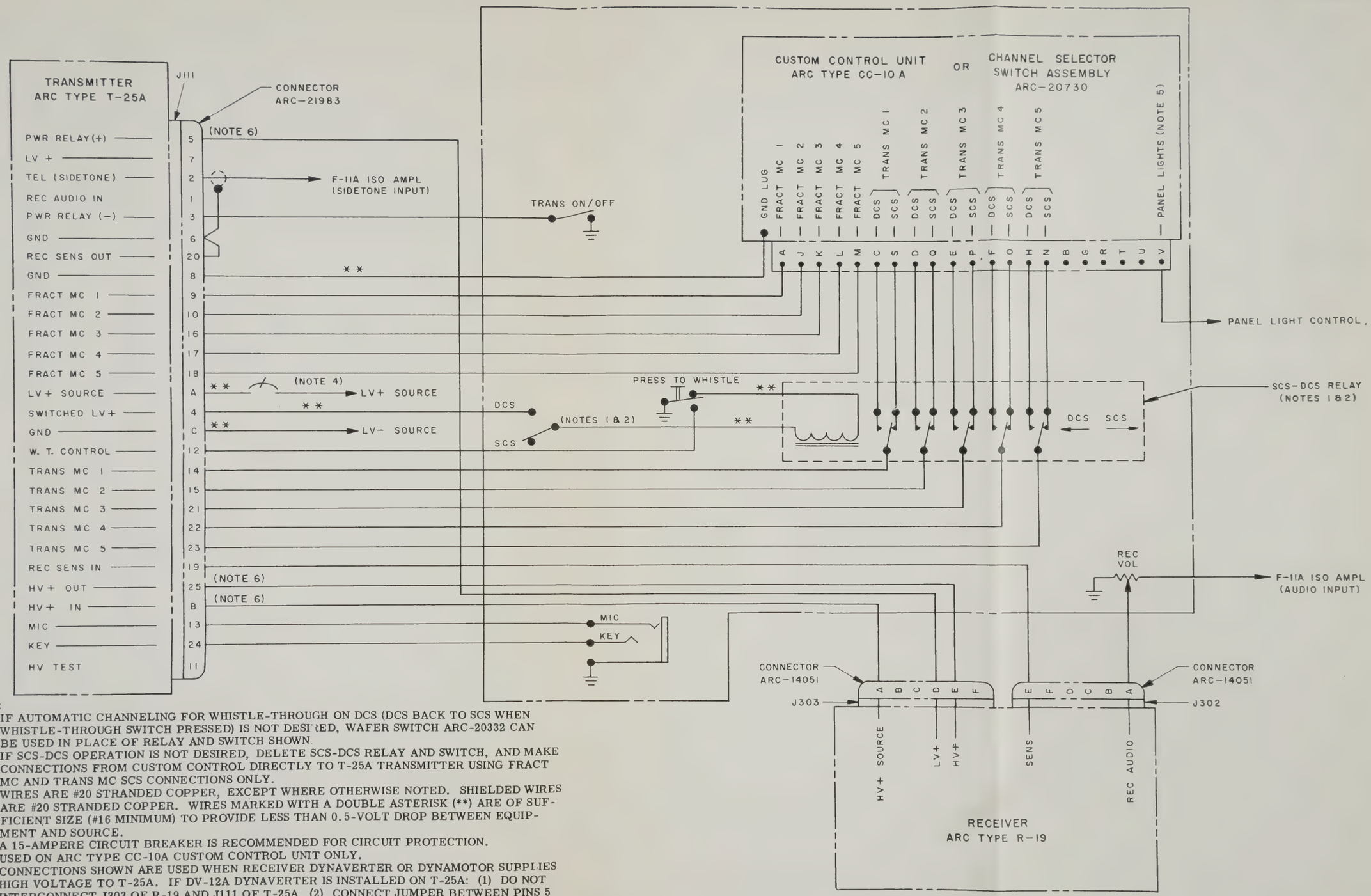


NOTES:

1. IF AUTOMATIC CHAN
WHISTLE-THROUGH S
BE USED IN PLACE O
2. IF SCS-DCS OPERATI
CONNECTIONS FROM
MC AND TRANS MC S
3. WIRES ARE #20 STRA
ARE #20 STRANDED C
FICIENT SIZE (#16 MI
MENT AND SOURCE.
4. A 15-AMPERE CIRCU
5. USED ON ARC TYPE C
6. CONNECTIONS SHOWN
HIGH VOLTAGE TO T-
INTERCONNECT J303
AND 7 OF J111, AND

22792C

Figure 4-18. T-25A Transmitter, R-19 Receiver, and F-11A Isolation Amplifier, Interconnection Diagram



NOTES:

1. IF AUTOMATIC CHANNELING FOR WHISTLE-THROUGH ON DCS (DCS BACK TO SCS WHEN WHISTLE-THROUGH SWITCH PRESSED) IS NOT DESIRED, WAFER SWITCH ARC-20332 CAN BE USED IN PLACE OF RELAY AND SWITCH SHOWN.
2. IF SCS-DCS OPERATION IS NOT DESIRED, DELETE SCS-DCS RELAY AND SWITCH, AND MAKE CONNECTIONS FROM CUSTOM CONTROL DIRECTLY TO T-25A TRANSMITTER USING FRACT MC AND TRANS MC SCS CONNECTIONS ONLY.
3. WIRES ARE #20 STRANDED COPPER, EXCEPT WHERE OTHERWISE NOTED. SHIELDED WIRES ARE #20 STRANDED COPPER. WIRES MARKED WITH A DOUBLE ASTERISK (**) ARE OF SUFFICIENT SIZE (#16 MINIMUM) TO PROVIDE LESS THAN 0.5-VOLT DROP BETWEEN EQUIPMENT AND SOURCE.
4. A 15-AMPERE CIRCUIT BREAKER IS RECOMMENDED FOR CIRCUIT PROTECTION.
5. USED ON ARC TYPE CC-10A CUSTOM CONTROL UNIT ONLY.
6. CONNECTIONS SHOWN ARE USED WHEN RECEIVER DYNAVERTER OR DYNAMOTOR SUPPLIES HIGH VOLTAGE TO T-25A. IF DV-12A DYNAVERTER IS INSTALLED ON T-25A: (1) DO NOT INTERCONNECT J303 OF R-19 AND J111 OF T-25A, (2) CONNECT JUMPER BETWEEN PINS 5 AND 7 OF J111, AND (3) INSTALL WIRED PLUG ARC-11934 (FURNISHED WITH R-19) ON J303.

22792C

Figure 4-18. T-25A Transmitter, R-19 Receiver, and F-11A Isolation Amplifier, Interconnection Diagram

Parts Catalog

for

ARC TYPE T-25A

VHF TRANSMITTER

AIRCRAFT RADIO CORPORATION
Boonton, New Jersey

7010098
ARCOC-T25A-1
April 1960

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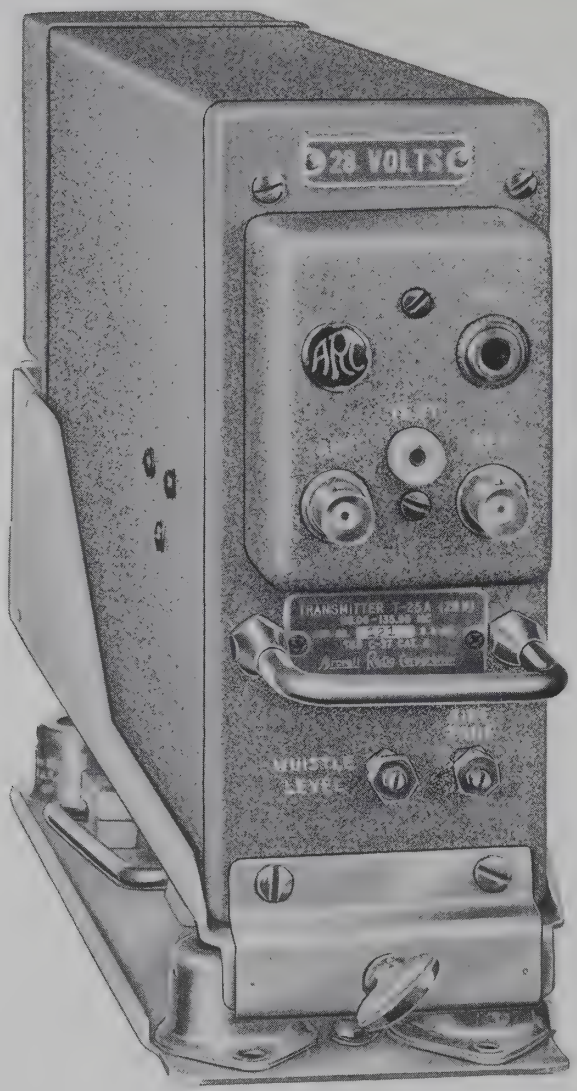


Figure 1. ARC Type T-25A Transmitter with ARC Type M-41A Mounting

TP1346

SECTION I

GENERAL INFORMATION

1-1. INTRODUCTION.

This book contains parts information for the ARC Type T-25A VHF Transmitter, C-82A Control Unit, and DV-12A Dynaverter® (Figure 1), manufactured by Aircraft Radio Corporation, Boonton, New Jersey.

1-2. PARTS LIST.

The Parts List, Section II, consists of a breakdown of the equipment into assemblies, subassemblies, and detail parts. Items which are made from bulk stock, such as cut lengths of wire, are not included.

The description column lists each assembly, or subassembly, and its detail parts properly indented to show their relationship to the assembly or subassembly. Attaching parts are listed in the same indented column, following the parts they attach. The symbol "- - - * - - -" indicates the completion of the attaching parts. A reference to a figure and index number in the description column refers to a separate illustration and listing in which the detail parts are shown, or to the illustration on which the part is shown as an assembled item. Parts which are limited in use to a specific model or serial number group are identified by noting the applicable model or serial numbers. Codes and part numbers of manufacturers (paragraph 1-5) other than ARC are also included in parentheses in the description column.

Except for attaching parts, the quantities listed in the units-per-assembly column are the quantities per assembly, per subassembly, etc. The quantities specified, therefore, are not necessarily the total for the equipment; total quantities are listed in the Numerical Index, Section III. The letters "AR" denote that the quantity used is "as required." "Ref" indicates an assembly which was removed previously and which is relisted for reference purposes.

1-3. NUMERICAL INDEX.

The part number column of the Numerical Index, Section III, lists all part numbers included in the Parts List, cross-referenced to the figure and index numbers. Parts which have neither an ARC nor a manufacturer's part number are listed alphabetically by item name at the beginning of the column. Where the part number refers to an assembly or subassembly which is not shown assembled on the illustration, no index number is assigned, and therefore only the figure number, on which the detail parts are shown, is listed in parentheses.

The numerical index is compiled in accordance with the following alphabetical-numerical system. Part number arrangement starts at the left and continues from left to right, one column at a time, until part number position in the numerical index is determined. Beginning with the first column, the order of precedence to determine the part number position is as follows:

1. Letters A through Z
2. Numerals 0 through 9

Continuing with the second and succeeding column, the order of precedence to determine the part number position is as follows:

1. Space (blank column)
2. Diagonal (slant) /
3. Point (period) .
4. Dash (—)
5. Parentheses ( )
6. Letters A through Z
7. Numerals 0 through 9

Alphabetical O's are considered as numerical zeros.

The total quantity column lists the total quantity of assemblies or parts for the equipment. The letters "AR" indicate that the quantities used are indeterminate (as required) and no definite quantity can be shown.

1-4. REFERENCE DESIGNATION INDEX.

The Reference Designation Index, Section IV, lists the reference designations which have been assigned to the parts of the equipment, cross-referenced to the figure and index numbers and the part numbers. Where no figure and index number exists for a part, the figure and index number of the next higher assembly is listed in parentheses. The reference designation column lists the reference designations in alphabetical-numerical sequence. All reference designations used in illustrations and publications pertaining to the equipment are listed.

1-5. MANUFACTURERS' CODES.

The following is a list of manufacturers' codes, and the corresponding names and addresses, which are referenced in this Parts Catalog.

Code	Name and Address
AB	Allen-Bradley Co. Milwaukee, Wisconsin
AMP	Amphenol-Borg Electronics Corp. Broadview (Chicago), Illinois
CGT	Cambridge Thermionic Corp. Cambridge, Massachusetts

Code	Name and Address
CLIP	Clifton Precision Products Co., Inc. Clifton Heights, Pennsylvania
CMPB	Colin Campbell Co., Inc. Danbury, Connecticut
CUT	Cutler-Hammer Milwaukee, Wisconsin
DABU	Dale Products, Inc. Columbus, Nebraska
EMM	Electro Motive Manufacturing Co. Willimantic, Connecticut
FML	Fansteel Metallurgical Corp. North Chicago, Illinois
GBR	Globar Div. Carborundum Co. Niagara Falls, New York
GE	General Electric Co. Schenectady, New York
GMC	Grimes Manufacturing Co. Urbana, Ohio
HRC	Hoffman Electronics Corp. Los Angeles, California
IPC	Industrial Products Co. Div. Amphenol-Borg Electronics Corp. Danbury, Connecticut
JFE	Jeffers Electronics Corp. St. Mary's, Pennsylvania
JON	E. F. Johnson Co. Waseca, Minnesota
ND	New Departure Div. General Motors Corp. Bristol, Connecticut
PK	Parker-Kalon Div. General American Transportation Corp. Clifton, New Jersey
SH	Shakeproof Div. Illinois Tool Works Elgin, Illinois
SLE	Sylvania Electric Products, Inc. Emporium, Pennsylvania
SLM	Solar Manufacturing Corp. New York, New York
SPR	Sprague Electric Co. North Adams, Massachusetts
WAL	Ward-Leonard Electric Co. Mount Vernon, New York
WKI	Waldes Kohinoor, Inc. Long Island City, New York

SECTION II

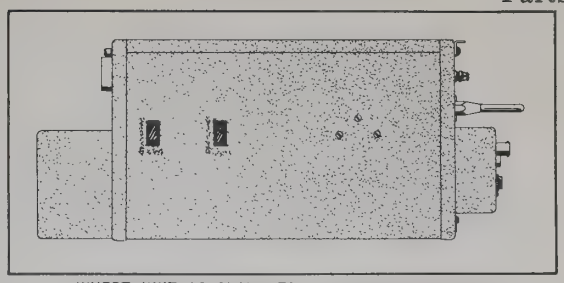
PARTS LIST

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
2-	21600-0014	TRANSMITTER ASSEMBLY, ARC Type T-25A(14V)	1
2-	21600-0028	TRANSMITTER ASSEMBLY, ARC Type T-25A(28V)	1
-1	23692	. COVER, Transmitter (supersedes 22273)	1
		(ATTACHING PARTS)	
-2	154-0016	. SCREW, Machine, fh, brs, blk oxidized, 4-40 thd by 1/4 in. lg . .	6
-3	514-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. blk oxidized, 4-40 thd by 7/32 in. lg (SH)(SEMS)	6
		- - - * - - -	
-4	22337-0014	. MODULATOR ASSEMBLY, 14V (see Figure 3)	1
-4	22337-0028	. MODULATOR ASSEMBLY, 28V (see Figure 3)	1
		(ATTACHING PARTS)	
-5	106-0020	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 5/16 in. lg . .	4
-6	14011	. WASHER, Spring	4
-7	21953	. BOX ASSEMBLY, Engraved.	1
		(ATTACHING PARTS)	
-8	513-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. blk oxidized, 3-48 thd by 7/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-9	20909	. . EMBLEM.	1
		(ATTACHING PARTS)	
-10	8040	. . NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk	1
-11	7730	. . WASHER, Spring tension.	1
		- - - * - - -	
-12	21952	. . BOX, Pierced.	1
-13	22317-0014	. FRONT PLATE ASSEMBLY, 14V (see Figure 4).	1
-13	22317-0028	. FRONT PLATE ASSEMBLY, 28V (see Figure 4).	1
		(ATTACHING PARTS)	
-14	16965	. SCREW, Machine, fh, brs, ni pl, 6-32 thd by 0.198 in. lg	3
-15	504-0024	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 3/8 in. lg (SH)(SEMS)	3
-16	104-0024	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/8 in. lg. . .	1
-17	8497	. WASHER, Lock (SH)(1704)	1
-18	13355	. TERMINAL, Lug.	1
		- - - * - - -	
-19	21834	. BRACKET ASSEMBLY	1
		(ATTACHING PARTS)	
-20	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	1
-21	504-0124	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 1-3/8 in. lg (SH)(SEMS)	2
		- - - * - - -	
-22	8625-9224	. CAPACITOR, Fixed, ceramic, 2200 $\mu\mu$f ±20 per cent, 500 vdcw . (AB)(24-222W)	2
-23	23037	. SEMICONDUCTOR DEVICE, Diode (HUG)(HD6226).	1
-24	22276-0014	. RELAY, Armature, 14V (GE)(3S2791G200N6)	1
-24	22276-0028	. RELAY, Armature, 28V (GE)(3S2791G200N9)	1
		(ATTACHING PARTS)	
-25	8040	. NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk.	2
-26	7736	. TERMINAL, Lug.	1
-27	8497	. WASHER, Lock (SH)(1704)	2
		- - - * - - -	
-28	14556	. INSULATOR, Post	1
		(ATTACHING PARTS)	
-29	143-0012	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 3/16 in. lg	1
-30	12924	. WASHER, Nonmetallic	1
		- - - * - - -	
-31	9368	. INSULATOR, Post	1
		(ATTACHING PARTS)	
-32	143-0012	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 3/16 in. lg	1
-33	12924	. WASHER, Nonmetallic	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
2-34	9542	. TERMINAL, Lug.	2
		(ATTACHING PARTS)	
-35	103-0012	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg . .	1
-36	10353	. WASHER, Spring tension	1
		- - - * - - -	
-37	2544	. TERMINAL, Lug.	1
		(ATTACHING PARTS)	
-38	103-0018	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 9/32 in. lg . .	1
-39	8497	. WASHER, Lock (SH)(1704)	1
		- - - * - - -	
-40	21984	. CONNECTOR, Receptacle, electrical (AMP)(94-42530).	1
		(ATTACHING PARTS)	
-41	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	5
-42	5219	. STUD.	1
-43	13046	. WASHER, Flat, brs, cad pl, 0.114 ID by 0.203 OD by 0.020 in. thk	1
		- - - * - - -	
-44	22277-0014	. GEARING ASSEMBLY, 14V	1
-44	22277-0028	. GEARING ASSEMBLY, 28V	1
		(ATTACHING PARTS)	
-45	104-0108	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1-1/8 in. lg. .	2
-46	7730	. WASHER, Spring tension	2
		- - - * - - -	
-47	21831	. . BRACKET, Angle	1
		(ATTACHING PARTS)	
-48	502-0012	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 2-56 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-49	18800	. . MOTOR, DC, 14V (CLIP)(DC-8-C-51).	1
-49	18801	. . MOTOR, DC, 28V (CLIP)(DC-8-C-11).	1
		(ATTACHING PARTS)	
-50	503-0010	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg	1
-51	19542	. . SPRING, Tension	1
		- - - * - - -	
-52	[1]	. . GEARING SUBASSEMBLY	1
-53	22734	. CLIP	4
		(ATTACHING PARTS)	
-54	163-0016	. SCREW, Machine, fil h, brs, ni pl, 3-48 thd by 1/4 in. lg	4
-55	4561	. NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk.	4
-56	4103	. WASHER, Lock (SH)(1703)(used in early production models). . . .	4
		- - - * - - -	
-57	19339	. CONNECTOR, Plug, electrical	2
-58	22195-0014	. TRANSFORMER, Modulation, 14V.	1
-58	22195-0028	. TRANSFORMER, Modulation, 28V.	1
		(ATTACHING PARTS)	
-59	504-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	3
-60	104-0016	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg. . .	1
-61	8497	. WASHER, Lock (SH)(1704)	1
-62	13355	. TERMINAL, Lug.	1
		- - - * - - -	
-63	21970	. PLATE	1
		(ATTACHING PARTS)	
-64	103-0020	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 5/16 in. lg . .	4
-65	503-0020	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	2
-66	18051	. CLIP	2
-67	4103	. WASHER, Lock (SH)(1703)	2
		- - - * - - -	

[1] Nonprocurable part.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
2-68	12587	. RELAY, Armature, 14V	2
-68	12588	. RELAY, Armature, 28V	2
		(ATTACHING PARTS)	
-69	503-0010	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	4
		- - - * - - -	
-70	22151	. CONNECTOR, Plug, electrical	1
-71	22190	. CONNECTOR, Plug, electrical	1
-72	22328-0014	. TRANSMITTER SUBASSEMBLY, 14V (see Figure 5)	1
-72	22328-0028	. TRANSMITTER SUBASSEMBLY, 28V (see Figure 5)	1



INVERT UNIT AS SHOWN TO AID IN DISASSEMBLING.

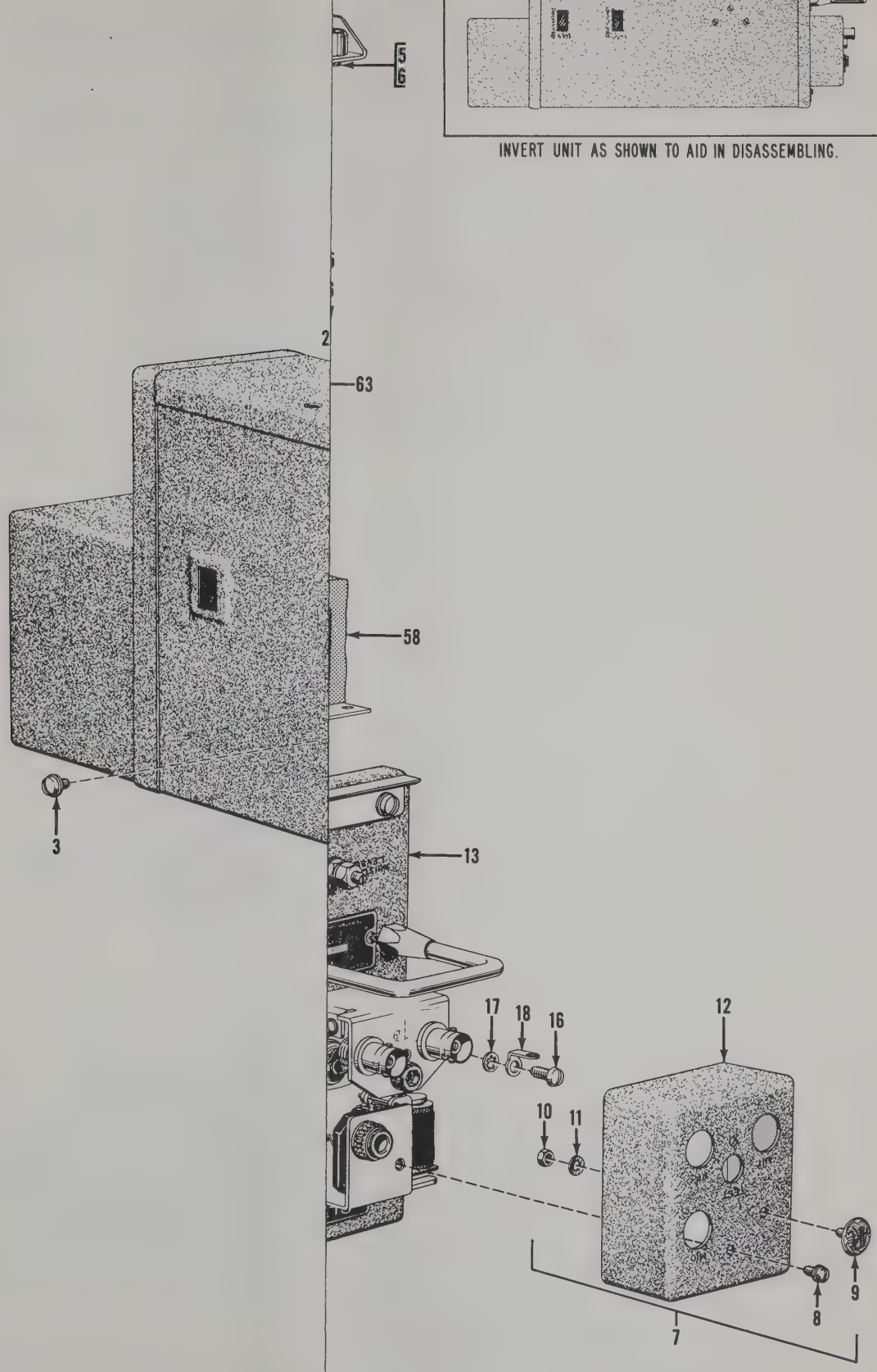


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Figure 2. T-25A Transmitter Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
2-68	12587	. RELAY, Armature, 14V	2
-68	12588	. RELAY, Armature, 28V	2
		(ATTACHING PARTS)	
-69	503-0010	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	4
		- - - * - - -	
-70	22151	. CONNECTOR, Plug, electrical	1
-71	22190	. CONNECTOR, Plug, electrical	1
-72	22328-0014	. TRANSMITTER SUBASSEMBLY, 14V (see Figure 5)	1
-72	22328-0028	. TRANSMITTER SUBASSEMBLY, 28V (see Figure 5)	1

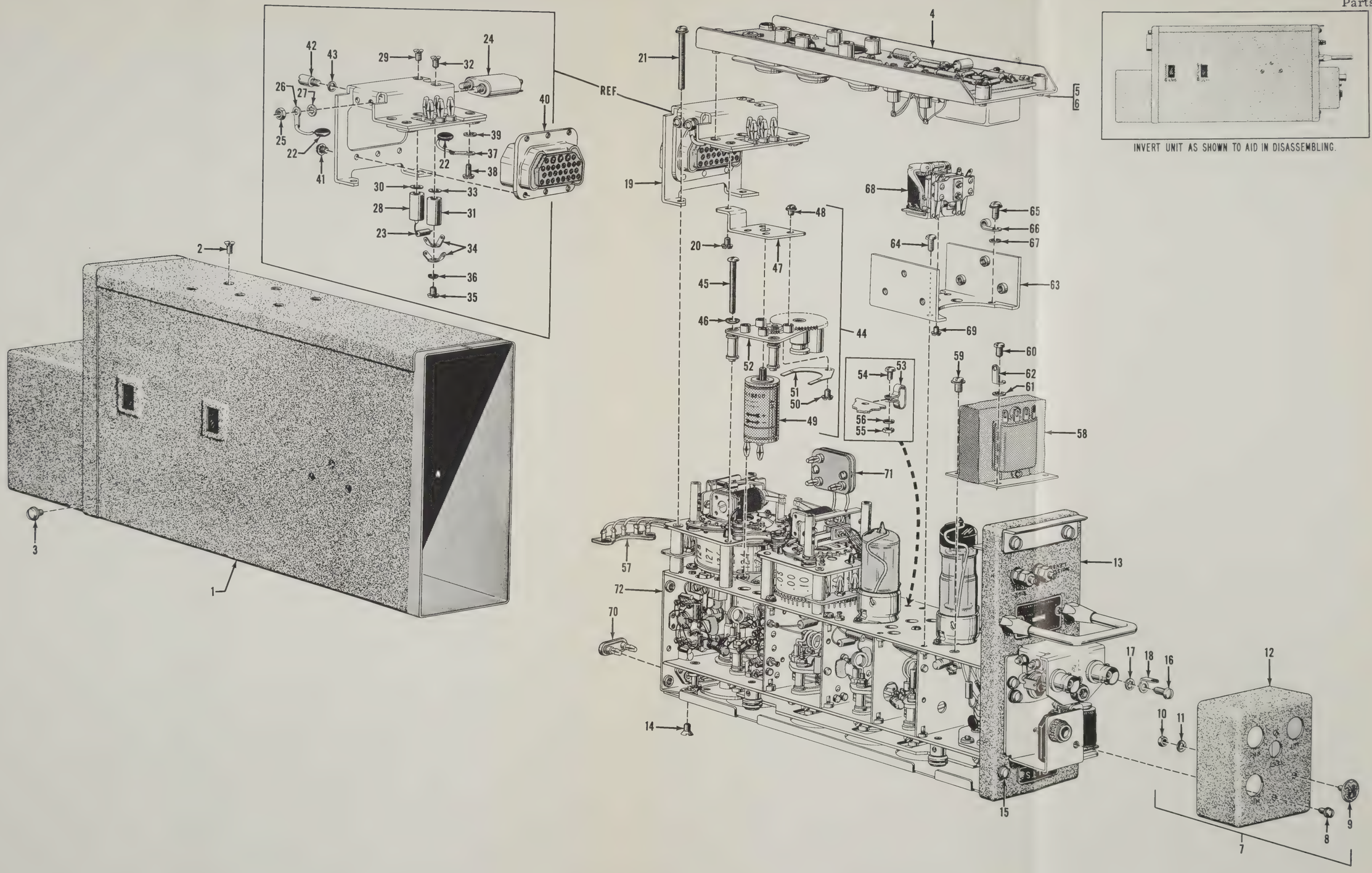


Figure 2. T-25A Transmitter Assembly

TP1735

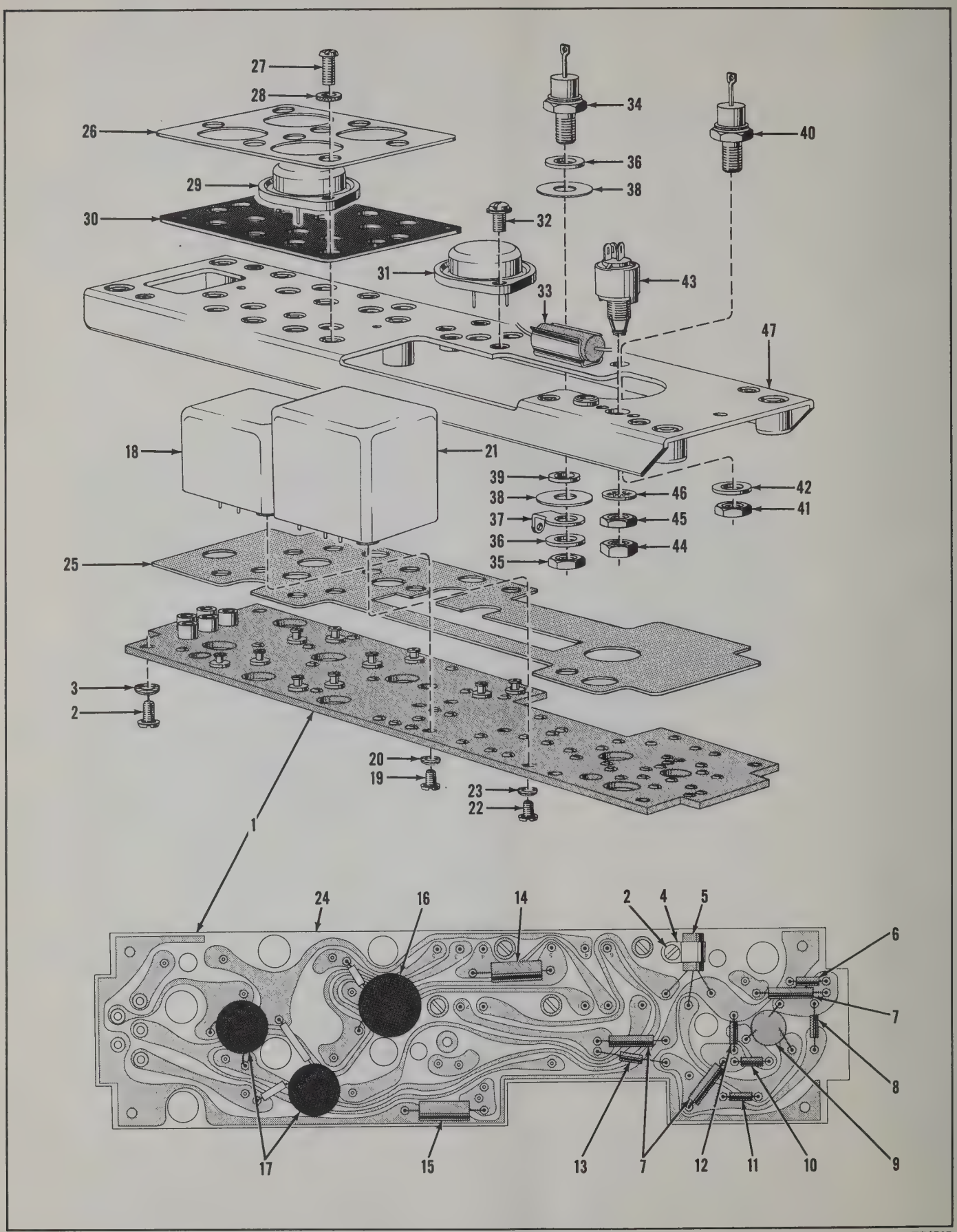
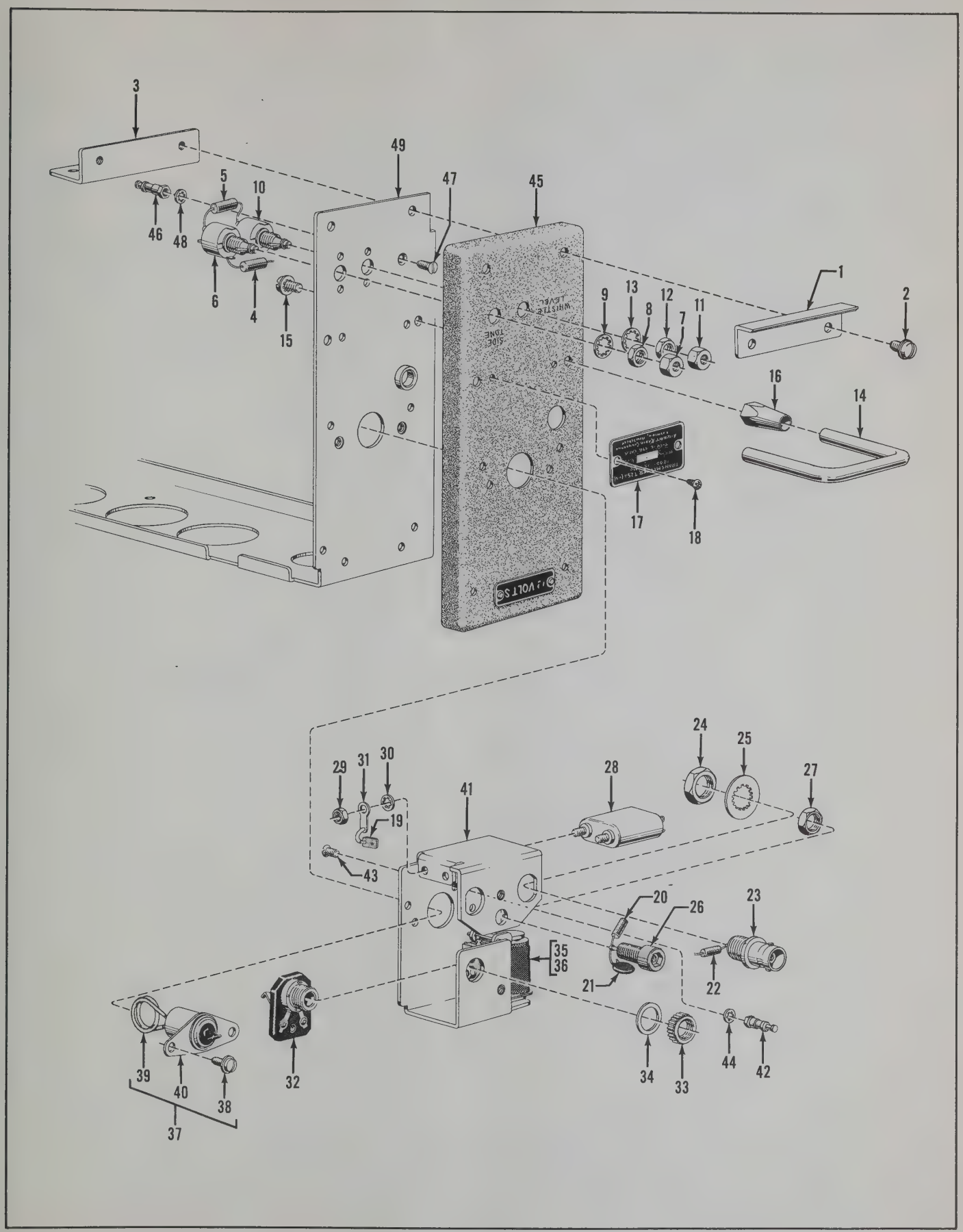


Figure 3. Modulator Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-	22337-0014	MODULATOR ASSEMBLY, 14V (see 10, Figure 2)	Ref
3-	22337-0028	MODULATOR ASSEMBLY, 28V (see 10, Figure 2)	Ref
-1	22335	. PRINTED CIRCUIT ASSEMBLY	1
		(ATTACHING PARTS)	
-2	104-0016	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg . .	6
-3	7730	. WASHER, Spring tension	5
-4	15887	. CLIP	1
		- - - * - - -	
-5	22293	. . TRANSISTOR, Type 2N217	1
-6	200-0122	. . RESISTOR, Fixed, comp, 1200 ohms ±10 per cent, 1/4w (AB) .	1
		(CB1221)	
-7	8914-0100	. . CAPACITOR, Fixed, electrolytic, 10 μf ±20 per cent, 20 vdcw.	3
		(SPR)(150D200B1)	
-8	200-0332	. . RESISTOR, Fixed, comp, 3300 ohms ±10 per cent, 1/4w (AB) .	1
		(CB3321)	
-9	22292	. . TRANSISTOR, Type 2N585	1
-10	200-0470	. . RESISTOR, Fixed, comp, 47 ohms ±10 per cent, 1/4w (AB) . .	1
		(CB4701)	
-11	200-0102	. . RESISTOR, Fixed, comp, 1000 ohms ±10 per cent, 1/4w (AB) .	1
		(CB1021)	
-12	200-0471	. . RESISTOR, Fixed, comp, 470 ohms ±10 per cent, 1/4w (AB). .	1
		(CB4711)	
-13	200-0331	. . RESISTOR, Fixed, comp, 330 ohms ±10 per cent, 1/4w (AB). .	1
		(CB3311)	
-14	202-0100	. . RESISTOR, Fixed, comp, 10 ohms ±5 per cent, 1w (AB). . . .	1
		(GB1005)(used in 14V unit)	
-14	202-0561	. . RESISTOR, Fixed, comp, 560 ohms ±5 per cent, 1w (AB) . . .	1
		(GB5615)(used in 28V unit)(supersedes 470 ohms or 620 ohms)	
-15	202-0100	. . RESISTOR, Fixed, comp, 10 ohms ±5 per cent, 1w (AB) . . .	1
		(GB1005)	
-16	8627-9223	. . CAPACITOR, Fixed, ceramic, 0.022 μμf ±20 per cent, 500 . .	1
		vdcw (AB)(40-203W)	
-17	8626-9334	. . CAPACITOR, Fixed, ceramic, 0.0033 μμf ±20 per cent, 500 .	2
		vdcw (AB)(36-332W)	
-18	22340	. . TRANSFORMER, Audio (SLE)(25346)	1
		(ATTACHING PARTS)	
-19	103-0012	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg .	2
-20	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-21	22339	. . TRANSFORMER, Audio driver (SLE)(25347)	1
		(ATTACHING PARTS)	
-22	103-0012	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg .	2
-23	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-24	22334	. . BOARD, Printed circuit	1
-25	22731	. PLATE, Insulating	1
-26	22141	. PLATE	1
		(ATTACHING PARTS)	
-27	104-0024	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/8 in. lg. . .	8
-28	22270	. BUSHING, Nylon	8
		- - - * - - -	
-29	22289	. TRANSISTOR, Type 2N375	4
-30	22140	. PLATE, Insulating	1
-31	22290	. TRANSISTOR, Type 2N176	1
		(ATTACHING PARTS)	
-32	504-0018	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,.	2
		ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	
		- - - * - - -	
-33	203-0100	. RESISTOR, Fixed, comp, 10 ohms ±5 per cent, 2w (used in 14V. .	1
		unit)(AB)(HB1005)	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-33	203-0121	. RESISTOR, Fixed, comp, 120 ohms ±5 per cent, 2w (used in 28V unit)(AB)(HB1215)	1
-34	22298-0360	. SEMICONDUCTOR DEVICE, Diode (HRC)(HZPR-36) . . . . . (ATTACHING PARTS)	1
-35	4180	. NUT, Hexagon, brs, ni pl, 10-32 thd by 0.094 in. thk	1
-36	4303	. WASHER, Flat, brs, ni pl, 0.200 ID by 0.437 OD by 0.038 in. thk	2
-37	4480	. TERMINAL, Lug.	1
-38	—	. WASHER, Mica (supplied w/34, Figure 3)	2
-39	—	. WASHER, Teflon (supplied w/34, Figure 3). . . . . - - - * - - -	1
-40	8923-0100	. SEMICONDUCTOR DEVICE, Diode (HRC)(HZPR-10) . . . . . (ATTACHING PARTS)	1
-41	4180	. NUT, Hexagon, brs, ni pl, 10-32 thd by 0.094 in. thk	1
-42	4303	. WASHER, Flat, brs, ni pl, 0.200 ID by 0.437 OD by 0.038 in. thk - - - * - - -	1
-43	8915-0101	. RESISTOR, Variable, comp, 0-100 ohms ±20 per cent, 0.33w . . (AB)(GLU1012-SD3028L) (ATTACHING PARTS)	1
-44	—	. NUT, Hexagon, 1/4-32 thd by 11/64 in. thk (AB)(M-4761)(supplied w/43, Figure 3)	1
-45	—	. NUT, Hexagon, 1/4-32 thd by 0.078 in. thk (AB)(M-4721)(supplied w/43, Figure 3)	1
-46	—	. WASHER, Lock, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . . . (M-4748)(supplied w/43, Figure 3) - - - * - - -	1
-47	22009	. CHASSIS	1
4-	22317-0014	FRONT PLATE ASSEMBLY, 14V (see 13, Figure 2)	Ref
4-	22317-0028	FRONT PLATE ASSEMBLY, 28V (see 13, Figure 2)	Ref
-1	22394	. BRACKET, Angle . . . . . (ATTACHING PARTS)	1
-2	506-0024	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 6-32 thd by 3/8 in. lg (SH)(SEMS) - - - * - - -	2
-3	21837	. BRACKET, Angle	1
-4	201-0220	. RESISTOR, Fixed, comp, 22 ohms ±5 per cent, 1/2w (AB)(EB2205)	1
-5	201-0103	. RESISTOR, Fixed, comp, 10,000 ohms ±5 per cent, 1/2w . . . . (AB)(EB1035)	1
-6	8915-0251	. RESISTOR, Variable, 0 to 250 ohms ±20 per cent, (AB) . . . . . (GLU2512SD3028L) (ATTACHING PARTS)	1
-7	—	. NUT, 1/4-32 thd by 11/64 in. thk (AB)(M-4761)(supplied w/6,. . . Figure 4)	1
-8	—	. NUT, 1/4-32 thd by 0.078 in. thk (AB)(M-4721)(supplied w/6,. . . Figure 4)	1
-9	—	. WASHER, Lock, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . . . (M-4748)(supplied w/6, Figure 4) - - - * - - -	1
-10	8915-0503	. RESISTOR, Variable, 0 to 50,000 ohms ±20 per cent (AB) . . . . (GLU5032SD3028L) (ATTACHING PARTS)	1
-11	—	. NUT, 1/4-32 thd by 11/64 in. thk (AB)(M-4761)(supplied w/10, . . Figure 4)	1
-12	—	. NUT, 1/4-32 thd by 0.078 in. thk (AB)(M-4721)(supplied w/10, . . Figure 4)	1
-13	—	. WASHER, Lock, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . . . (M-4748)(supplied with 10, Figure 4) - - - * - - -	1
-14	21614-0148	. HANDLE . . . . . (ATTACHING PARTS)	1
-15	506-0024	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 6-32 thd by 3/8 in. lg (SH)(SEMS)	2



TP1739

Figure 4. Front Plate Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-16	22138	. COLLAR	1
-17	21775	. PLATE, Identification	1
-17	21776	. PLATE, Identification	1
		(ATTACHING PARTS)	
-18	8081	. SCREW, Tapping, rh, Phillips dr, stl, blk parkerized, No. 2 by 5/32 in. lg (PK)(Z)	2
		- - - * - - -	
-19	10281	. CAPACITOR, Fixed, ceramic, 0.2 μμf	1
-20	200-0473	. RESISTOR, Fixed, comp, 47,000 ohms ±10 per cent, 1/4w (AB) (CB4731)	1
-21	8625-9104	. CAPACITOR, Fixed, ceramic, 0.001 μf ±20 per cent, 500 vdcw (AB)(16-102W)	1
-22	19663	. SEMICONDUCTOR DEVICE, Diode, type 1N90	1
-23	15185	. CONNECTOR, Receptacle, electrical (IPC)(IPC-18450)	2
		(ATTACHING PARTS)	
-24	—	. NUT, Hexagon (supplied w/23, Figure 4)	2
-25	—	. WASHER, Lock (supplied w/23, Figure 4)	2
		- - - * - - -	
-26	8803-5410	. JACK, Tip (JON)(105-601)	1
		(ATTACHING PART)	
-27	—	. NUT, Hexagon (supplied w/26, Figure 4)	1
		- - - * - - -	
-28	22276-0014	. RELAY, Armature, 14V (GE)(3S2791G200N6)	1
-28	22276-0028	. RELAY, Armature, 28V (GE)(3S2791G200N9)	1
		(ATTACHING PARTS)	
-29	8040	. NUT, Hexagon, brs, ni pl, 4040 thd by 0.062 in. thk.	2
-30	8497	. WASHER, Lock, sst, 0.119 ID by 0.260 OD by 0.016 in. thk (SH) (1704)	3
-31	7736	. TERMINAL, Lug.	1
		- - - * - - -	
-32	9391	. JACK, Tip	1
		(ATTACHING PARTS)	
-33	4697	. NUT, Round, serrated, brs, ni pl, 3/8-32 thd by 0.094 in. thk	1
-34	12517	. WASHER, Flat, brs, ni pl, 0.380 ID by 0.500 OD by 0.020 in. thk	1
		- - - * - - -	
-35	14484	. RELAY, Armature, 14V	1
-35	14485	. RELAY, Armature, 28V	1
		(ATTACHING PARTS)	
-36	143-0008	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 1/8 in. lg	2
		- - - * - - -	
-37	22147	. COUPLING COIL ASSEMBLY	1
		(ATTACHING PARTS)	
-38	504-0020	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 5/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-39	—	. . COIL, No. 20 tinned, copper wire, 1-1/2 turns close wound (p/o 37, Figure 4)	1
-40	22146	. . FILTER	1
-41	21874	. BRACKET.	1
-42	22637	. INSULATOR, Standoff (CGT)(X2128-F)	1
		(ATTACHING PARTS)	
-43	143-0014	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 7/32 in. lg	1
-44	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH) (1703)	1
		- - - * - - -	
-45	21954	. PLATE, Front.	1
-46	22637	. INSULATOR, Standoff	1
		(ATTACHING PARTS)	
-47	143-0014	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 7/32 in. lg	1
-48	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH) (1703)	1
		- - - * - - -	
-49	21903	. FRAME ASSEMBLY	1

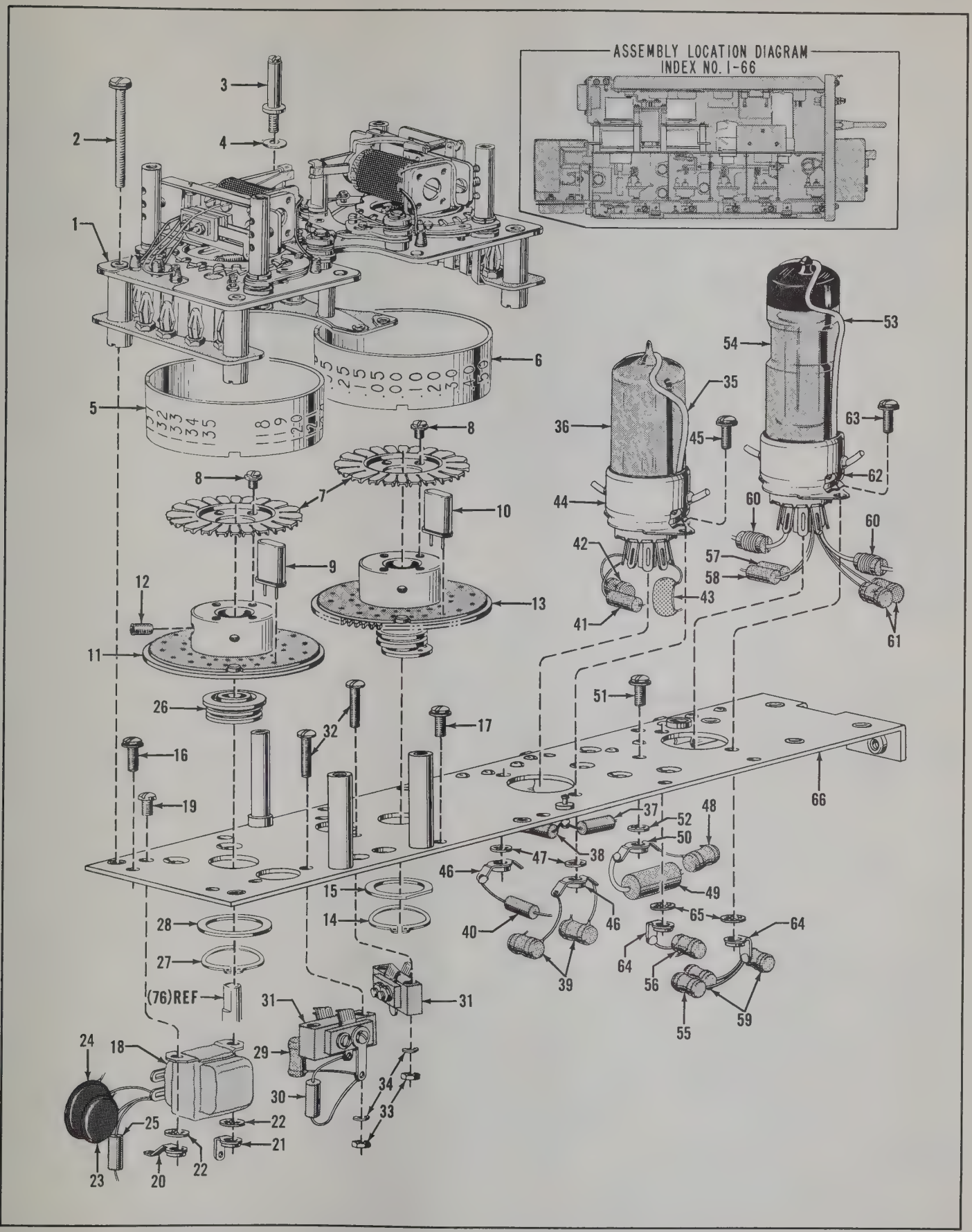


Figure 5. Transmitter Subassembly
(Sheet 1 of 2)

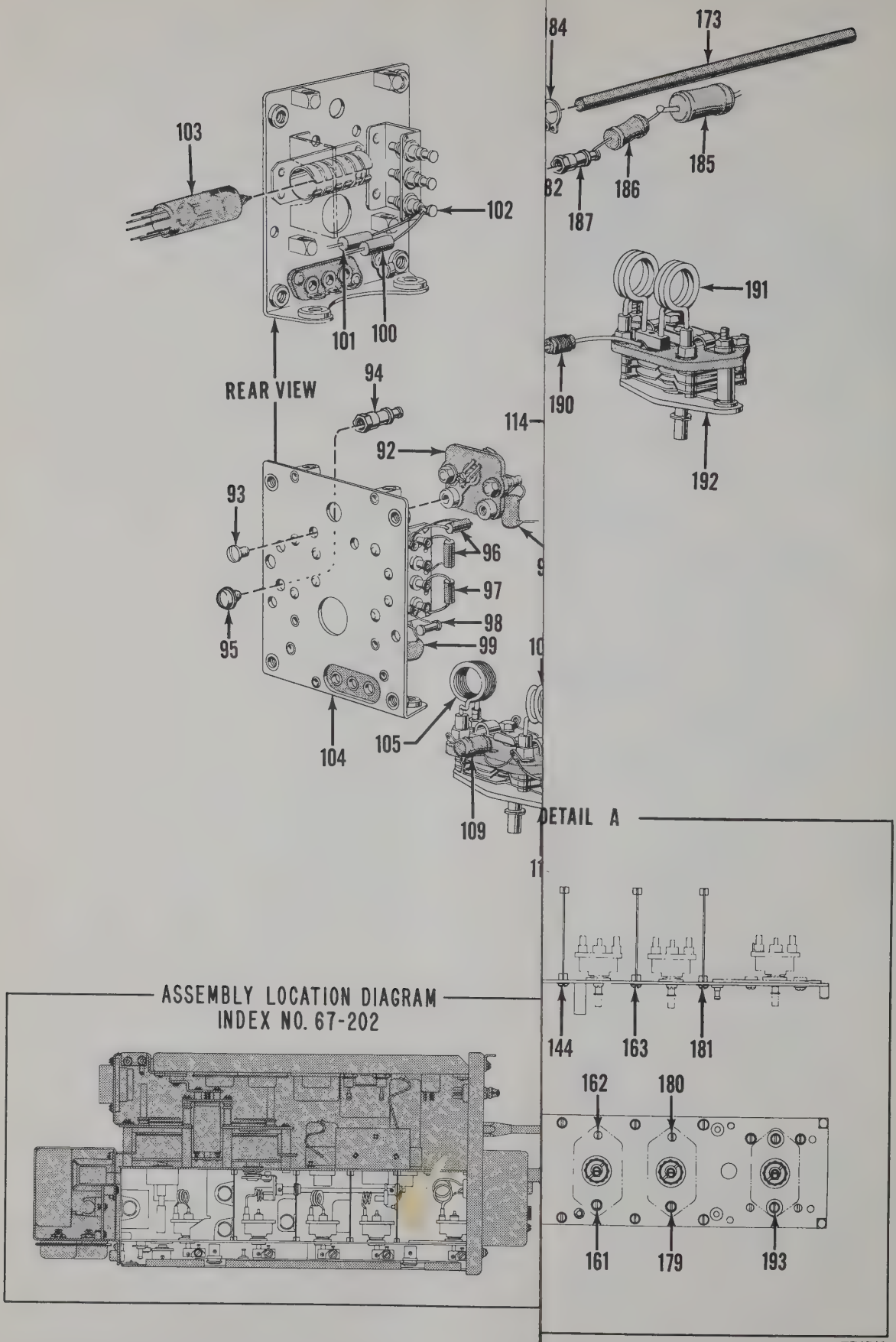
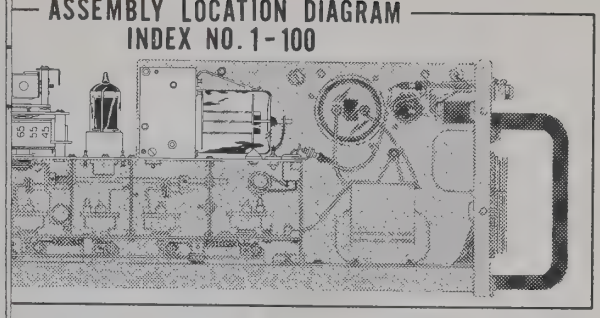


Figure 5. Transmitter Subassembly
(Sheet 2 of 2)



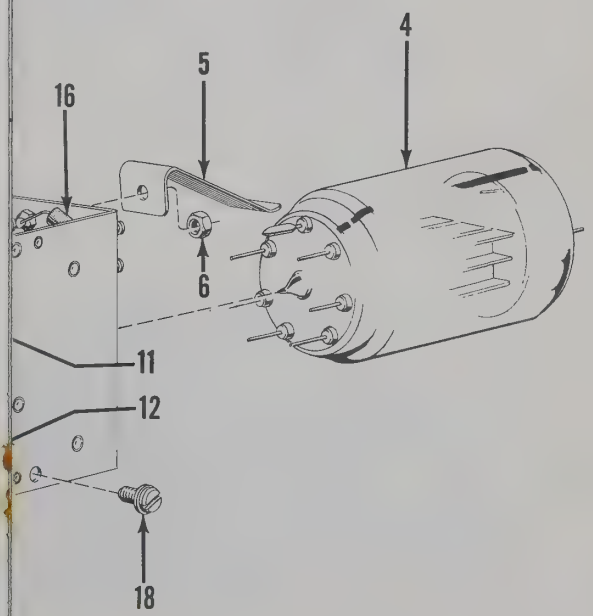


Figure 3. Transmitter Assembly
(Sheet 1 of 2)

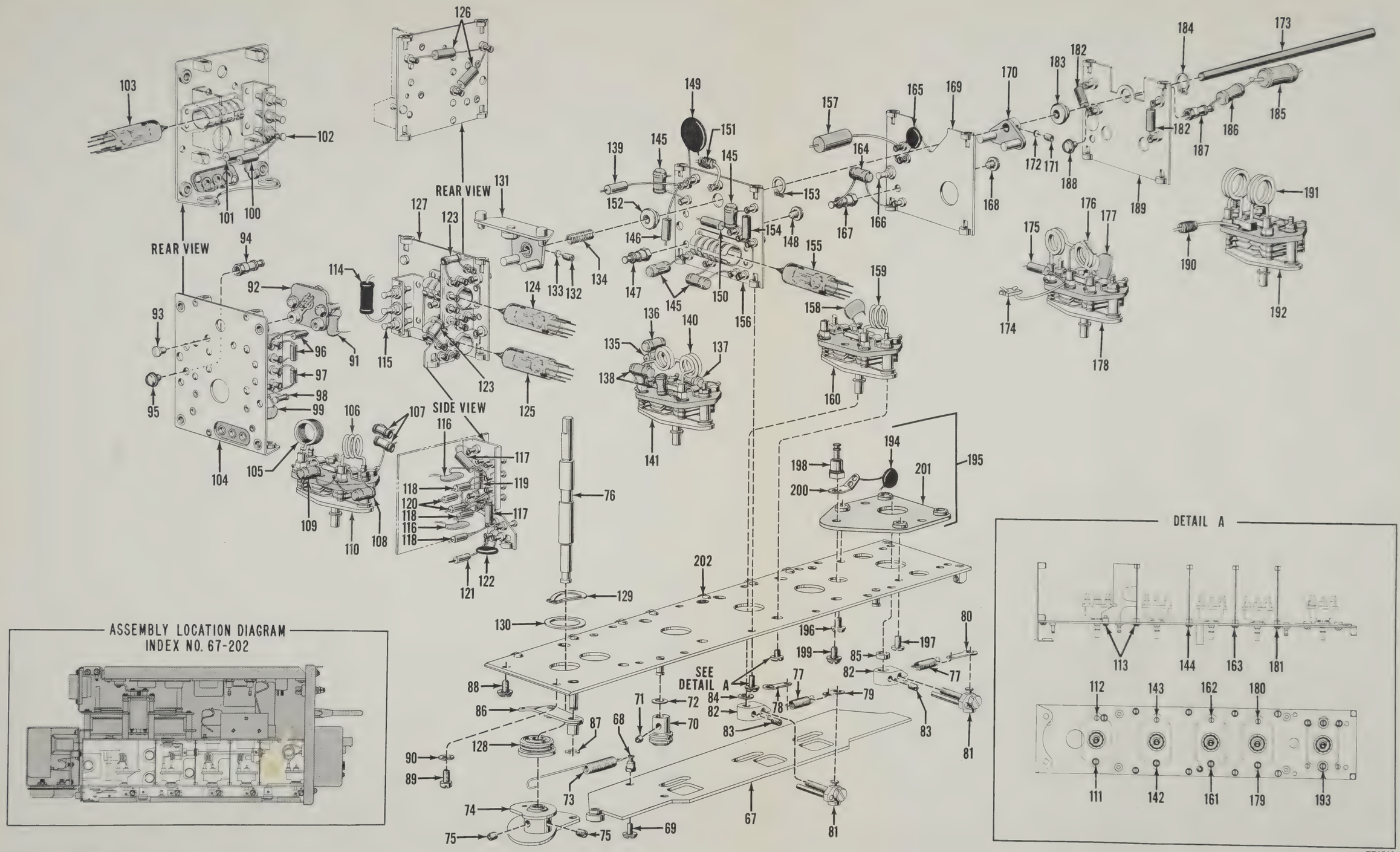
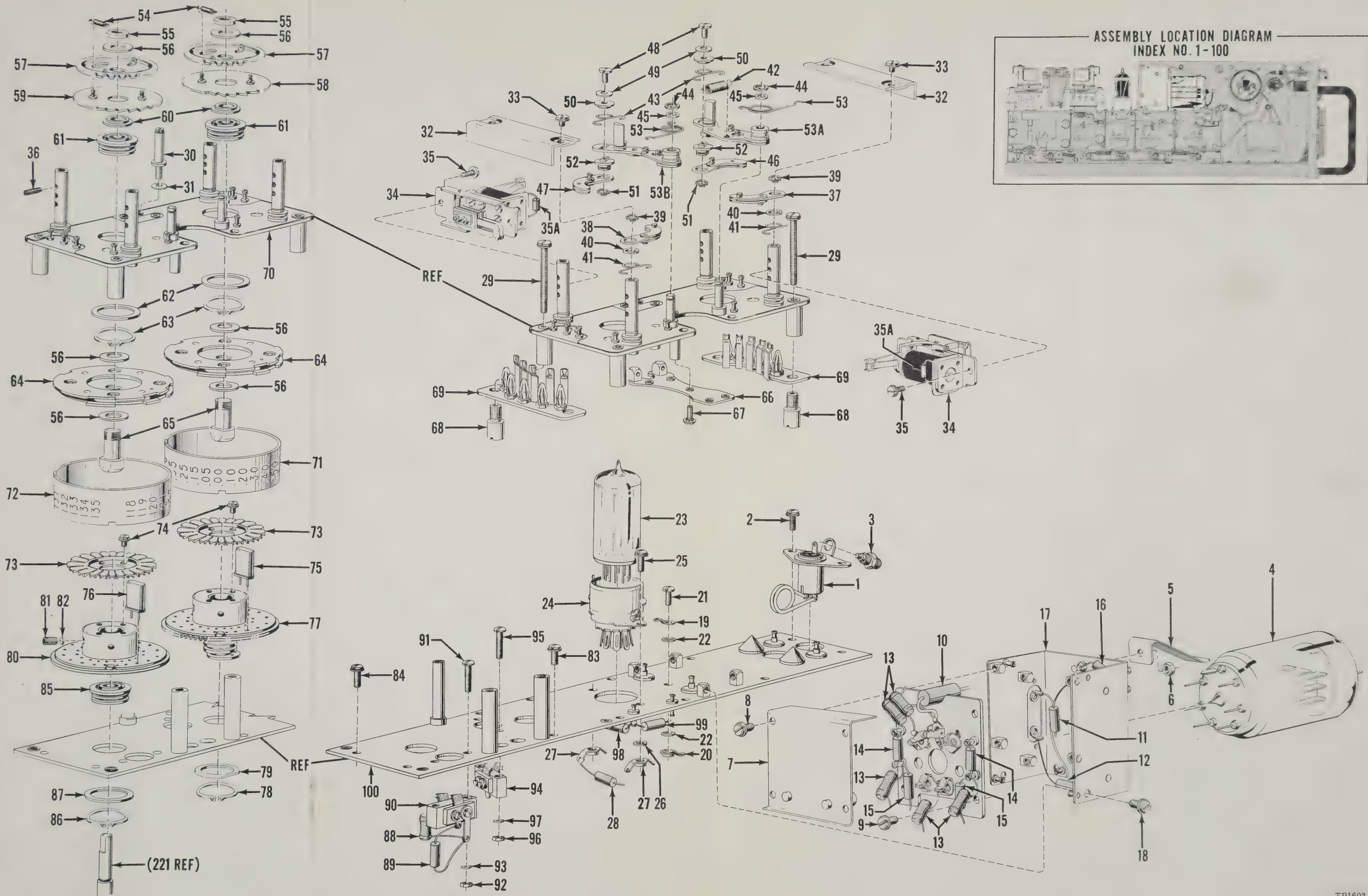


Figure 5. Transmitter Subassembly
(Sheet 2 of 2)

ASSEMBLY LOCATION DIAGRAM
INDEX NO. 1-100



TP1603

Figure 3. Transmitter Assembly
(Sheet 1 of 2)

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
	19597	. PLATE OSCILLATOR SUBASSEMBLY . . . . . (ATTACHING PARTS)	1
3-101	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-102	19603	. . CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-103	103(3/16)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg . .	2
		- - - * - - -	
-104	19422	. . CONNECTOR, Receptacle, electrical . . . . . (ATTACHING PARTS)	1
-105	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg . .	2
-106	13473	. . WASHER, Spring tension.	2
		- - - * - - -	
-107	8832	. . CAPACITOR, Fixed, ceramic, 1000 $\mu\mu$f ±20 per cent, 500 vdcw . (SLM)(CF-100-2-1022)	3
-108	201(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±5 per cent, 1/2w (AB). . (EB3335)	1
-109	201(20K)	. . RESISTOR, Fixed, comp, 20,000 ohms ±5 per cent, 1/2w (AB). . (EB2035)	1
-110	8870(51)	. . CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw . . . . (EMM)(type VTDM-15)	2
-111	204(10)	. . RESISTOR, Fixed, comp, 10 ohms ±10 per cent, 1/4w (GBR) . . (997-10)	1
-112	200(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w . . . (AB)(CB3331)	1
-113	200(220)	. . RESISTOR, Fixed, comp, 220 ohms ±10 per cent, 1/4w (AB) . . (CB2211)	2
-114	700-136	. . ELECTRON TUBE, Type 6021	1
-115	19598	. . PLATE	1
-116	19923	. COIL.	1
-117	8791(20)	. CAPACITOR, Fixed, ceramic, 20 $\mu\mu$f ±2 per cent, 500 vdcw . . .	1
-118	8795(2.0)	. CAPACITOR, Fixed, ceramic, 2 $\mu\mu$f ±0.25 per cent, 500 vdcw . .	1
-119	19620	. COIL.	1
-120	8765(24)	. CAPACITOR, Fixed, ceramic dielectric, 24 $\mu\mu$f ±2 per cent, . . . 500 vdcw (CC20HG240G)(JAN-C-20A)	2
-121	21326	. CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-122	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-123	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . .	1
		- - - * - - -	
	19592	. PLATE MIXER SUBASSEMBLY. . . . . (ATTACHING PARTS)	1
-124	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg	3
		- - - * - - -	
-125	8870(51)	. CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw (EMM). . (VTDM-15)	2
-126	15174	. CHOKE, 14 μh ±10 per cent (JFE)(CF Ir-7/16)	1
-127	8627(0.01)	. CAPACITOR, Fixed, ceramic, 0.01 μf ±20 per cent, 500 vdcw. . . (AB)(36-103W)	1
-128	8870(240)	. CAPACITOR, Fixed, mica, 240 $\mu\mu$f ±5 per cent, 500 vdcw (EMM) . (VTDM-15)	2
-129	200(240)	. RESISTOR, Fixed, comp, 240 ohms ±10 per cent, 1/4w (AB) . . . (CB2411)	3
-130	200(22K)	. RESISTOR, Fixed, comp, 22,000 ohms ±10 per cent, 1/4w (AB) . . (CB2231)	2
-131	8877(1.0)	. CHOKE, 1.0 μh ±20 per cent at 230 mc (JFE)(10100-630)	2
-132	14141	. CHOKE, 3 μh ±10 per cent (JFE)(10100-652)	2
-133	200(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±10 per cent, 1/4w (AB). . (CB1041)	1

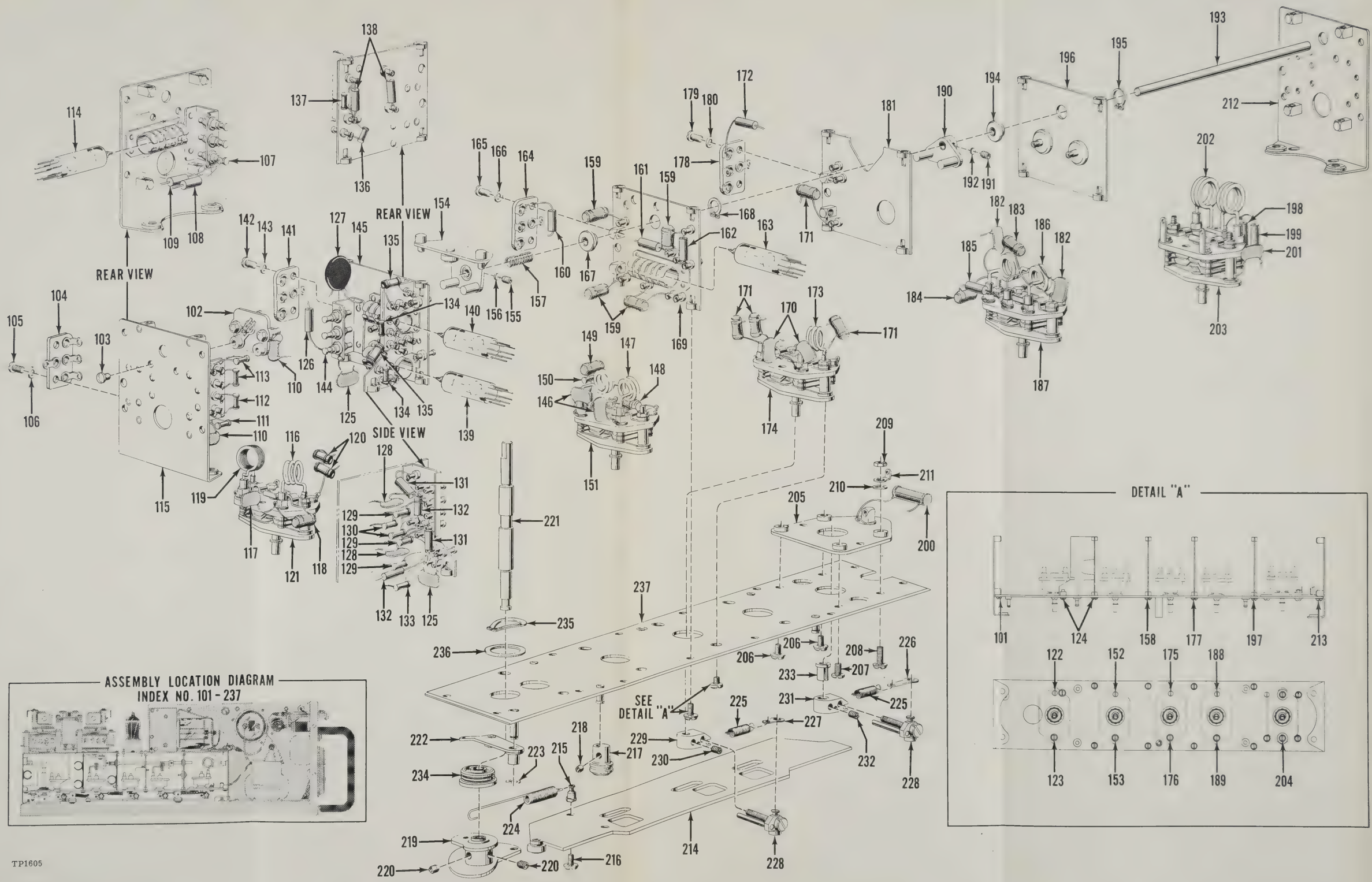


Figure 3. Transmitter Assembly
(Sheet 2 of 2)

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
	19597	. PLATE OSCILLATOR SUBASSEMBLY . . . . . (ATTACHING PARTS)	1
3-101	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-102	19603	. . CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-103	103(3/16)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg . .	2
		- - - * - - -	
-104	19422	. . CONNECTOR, Receptacle, electrical . . . . . (ATTACHING PARTS)	1
-105	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg . .	2
-106	13473	. . WASHER, Spring tension.	2
		- - - * - - -	
-107	8832	. . CAPACITOR, Fixed, ceramic, 1000 $\mu\mu$f ±20 per cent, 500 vdcw . (SLM)(CF-100-2-1022)	3
-108	201(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±5 per cent, 1/2w (AB). . (EB3335)	1
-109	201(20K)	. . RESISTOR, Fixed, comp, 20,000 ohms ±5 per cent, 1/2w (AB). . (EB2035)	1
-110	8870(51)	. . CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw . . . . (EMM)(type VTDM-15)	2
-111	204(10)	. . RESISTOR, Fixed, comp, 10 ohms ±10 per cent, 1/4w (GBR) . . (997-10)	1
-112	200(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w . . . (AB)(CB3331)	1
-113	200(220)	. . RESISTOR, Fixed, comp, 220 ohms ±10 per cent, 1/4w (AB) . . (CB2211)	2
-114	700-136	. . ELECTRON TUBE, Type 6021	1
-115	19598	. . PLATE	1
-116	19923	. COIL.	1
-117	8791(20)	. CAPACITOR, Fixed, ceramic, 20 $\mu\mu$f ±2 per cent, 500 vdcw . . .	1
-118	8795(2.0)	. CAPACITOR, Fixed, ceramic, 2 $\mu\mu$f ±0.25 per cent, 500 vdcw . .	1
-119	19620	. COIL.	1
-120	8765(24)	. CAPACITOR, Fixed, ceramic dielectric, 24 $\mu\mu$f ±2 per cent, . . . 500 vdcw (CC20HG240G)(JAN-C-20A)	2
-121	21326	. CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-122	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-123	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . .	1
		- - - * - - -	
	19592	. PLATE MIXER SUBASSEMBLY. . . . . (ATTACHING PARTS)	1
-124	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg	3
		- - - * - - -	
-125	8870(51)	. CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw (EMM). . (VTDM-15)	2
-126	15174	. CHOKE, 14 μh ±10 per cent (JFE)(CF Ir-7/16)	1
-127	8627(0.01)	. CAPACITOR, Fixed, ceramic, 0.01 μf ±20 per cent, 500 vdcw. . . (AB)(36-103W)	1
-128	8870(240)	. CAPACITOR, Fixed, mica, 240 $\mu\mu$f ±5 per cent, 500 vdcw (EMM) . (VTDM-15)	2
-129	200(240)	. RESISTOR, Fixed, comp, 240 ohms ±10 per cent, 1/4w (AB) . . . (CB2411)	3
-130	200(22K)	. RESISTOR, Fixed, comp, 22,000 ohms ±10 per cent, 1/4w (AB) . . (CB2231)	2
-131	8877(1.0)	. CHOKE, 1.0 μh ±20 per cent at 230 mc (JFE)(10100-630)	2
-132	14141	. CHOKE, 3 μh ±10 per cent (JFE)(10100-652)	2
-133	200(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±10 per cent, 1/4w (AB). . (CB1041)	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-134	200(39K)	. RESISTOR, Fixed, comp, 39,000 ohms ±10 per cent, 1/4w (AB) . . (CB3931)	2
-135	8765(24)	. CAPACITOR, Fixed, ceramic, 24 μμf ±2 per cent, 500 vdcw . . . (CC20HG240G)(JAN-C-20A)	2
-136	200(560)	. RESISTOR, Fixed, comp, 560 ohms ±10 per cent, 1/4w (AB) . . . (CB5611)	1
-137	200(4700)	. RESISTOR, Fixed, comp, 4700 ohms ±10 per cent, 1/4w (AB) . . . (CB4721)	1
-138	8877(0.68)	. CHOKE, 0.68 μh ±20 per cent at 285 mc (JFE)(10100-628).	2
-139	700-122	. ELECTRON TUBE, Type 5718	1
-140	700-136	. ELECTRON TUBE, Type 6021	1
-141	19422	. RECEPTACLE . . . . . (ATTACHING PARTS)	1
-142	103(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg . . .	2
-143	13473	. WASHER, Spring tension . . . . . - - - * - - -	2
-144	8832	. CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw . . (SLM)(CF-100-2-1022)	3
-145	19593	. PLATE.	1
-146	8791(20)	. CAPACITOR, Fixed, ceramic, 20 μμf ±2 per cent, 500 vdcw . . .	2
-147	19619	. COIL.	1
-148	8791(4)	. CAPACITOR, Fixed, ceramic, 4 μμf ±0.25 per cent, 500 vdcw . .	1
-149	8791(7)	. CAPACITOR, Fixed, ceramic, 7 μμf ±0.25 per cent, 500 vdcw . .	1
-150	200(33K)	. RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w . . . . (AB)(CB3331)	1
-151	21326	. CAPACITOR, Variable, air dielectric . . . . . (ATTACHING PARTS)	1
-152	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-153	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . - - - * - - -	1
-154	19451	. BRACKET . . . . . (ATTACHING PARTS)	1
-155	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
-156	10290	. DISC . . . . . - - - * - - -	1
-157	20612	. SPRING, Helical, compression	1
	19588	. PLATE AMPLIFIER SUBASSEMBLY . . . . . (ATTACHING PARTS)	1
-158	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS) - - - * - - -	2
-159	8796(120)	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw. . .	4
-160	201(4700)	. RESISTOR, Fixed, comp, 4700 ohms ±5 per cent, 1/2w (AB) . . . (EB4725)	1
-161	8877(3.3)	. CHOKE, 3.3 μh ±10 per cent (JFE)(10102-620).	1
-162	201(1K)	. RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 1/2w (AB) . . . (EB1025)	1
-163	700-129	. ELECTRON TUBE, Type 5840	1
-164	19422	. RECEPTACLE . . . . . (ATTACHING PARTS)	1
-165	103(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg . . .	2
-166	13473	. WASHER, Spring tension . . . . . - - - * - - -	2
-167	19584	. BEARING . . . . . (ATTACHING PARTS)	1
-168	16171	. RING, Retaining (WKI)(5100-25-W) . . . . . - - - * - - -	1
-169	19589	. PLATE	1
-170	8870(51)	. CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM) . (VTDM-15-51)	2
-171	8796(120)	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw . .	4

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-172	201(10K)	. RESISTOR, Fixed, comp, 10,000 ohms ±5 per cent, 1/2w (AB) . . (EB1035)	1
-173	19620	. COIL	1
-174	21326	. CAPACITOR, Variable, air dielectric . . . . . (ATTACHING PARTS)	1
-175	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-176	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . - - - * - - -	1
	19585	. PLATE SUBASSEMBLY . . . . . (ATTACHING PARTS)	1
-177	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS) - - - * - - -	2
-178	19422	. . RECEPTACLE. . . . . (ATTACHING PARTS)	1
-179	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg. .	2
-180	13473	. . WASHER, Spring tension . . . . . - - - * - - -	2
-181	19586	. . PLATE	1
-182	8791(20)	. CAPACITOR, Fixed, ceramic, 20 μμf ±2 per cent, 500 vdcw . . .	2
-183	8791(4)	. CAPACITOR, Fixed, ceramic, 4 μμf ±0.25 per cent, 500 vdcw . .	1
-184	8796(120)	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw. . .	1
-185	8877(1.0)	. CHOKE, 1.0 μh ±20 per cent (JFE)(10100-630)	1
-186	19617	. COIL.	1
-187	19639	. CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-188	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-189	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . . - - - * - - -	1
-190	19448	. PLATE. . . . . (ATTACHING PARTS)	1
-191	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
-192	10290	. DISC . . . . . - - - * - - -	1
-193	19659	. SHAFT.	1
-194	19584	. BEARING. . . . . (ATTACHING PARTS)	1
-195	16171	. RING, Retaining (WKI)(5100-25-W) . . . . . - - - * - - -	1
-196	19580	. PLATE. . . . . (ATTACHING PARTS)	1
-197	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS) - - - * - - -	2
-198	201(47)	. RESISTOR, Fixed, comp, 47 ohms ±5 per cent, 1/2w (AB)(EB4705).	1
-199	15174	. CHOKE, 14 μh ±10 per cent (JFE)(CF Ir-7/16)	1
-200	8797(300)	. CAPACITOR, Fixed, ceramic, 300 μμf ±5 per cent, 500 vdcw . . .	1
-201	8796(120)	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw . . .	1
-202	19616	. COIL.	1
-203	19420	. CAPACITOR, Variable, air dielectric. . . . . (ATTACHING PARTS)	1
-204	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS) - - - * - - -	2

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-205	19390	. PLATE, Insulating	1
		(ATTACHING PARTS)	
-206	504(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	2
-207	104(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg	1
-208	504(3/8)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 3/8 in. lg (SH)(SEMS)	1
-209	8040	. NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk	1
-210	8497	. WASHER, Lock, sst, 0.119 ID by 0.260 OD by 0.029 in. thk (SH). (1704-4)	
-211	5216	. TERMINAL, Lug	1
		- - - * - - -	
-212	19576	. PLATE.	1
		(ATTACHING PARTS)	
-213	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-214	19465	. PLATE ASSEMBLY	1
-215	15453	. TERMINAL, Stud	2
		(ATTACHING PARTS)	
-216	504(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 3/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-217	19419	. BEARING.	4
		(ATTACHING PARTS)	
-218	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	4
		- - - * - - -	
-219	19424	. CAM.	1
		(ATTACHING PARTS)	
-220	306(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/8 in. lg	2
		- - - * - - -	
-221	21482	. SHAFT.	1
-222	19367	. LEVER SUBASSEMBLY	1
		(ATTACHING PARTS)	
-223	17326	. RING, Retaining (WKI)(5133-12-C-MF)	1
		- - - * - - -	
-224	19626	. SPRING, Helical, extension	1
-225	14785	. SPRING, Helical, extension	3
-226	4023	. TERMINAL.	3
-227	4548	. TERMINAL.	2
-228	19467	. ARM ASSEMBLY	5
-229	19645	. BLOCK.	4
		(ATTACHING PARTS)	
-230	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	4
		- - - * - - -	
-231	19646	. BLOCK.	1
		(ATTACHING PARTS)	
-232	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
		- - - * - - -	
-233	19649	. SLEEVE	1
-234	20620	. BEARING, Ball (ND)(SSRS77NR3HGZD1228E).	1
		(ATTACHING PARTS)	
-235	20625	. RING, Retaining (WKI)(5101-56-W)	1
-236	21322	. WASHER, Flat, al, 0.565 ID by 0.781 OD by 0.032 in. thk.	1
		- - - * - - -	
-237	19386	. PLATE, Mounting.	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-	20420(14V)	RECEIVER ASSEMBLY (14V)(see 15, Figure 2)	Ref
4-	20420(28V)	RECEIVER ASSEMBLY (28V)(see 15, Figure 2)	Ref
	19990(14V)	. TUNER ASSEMBLY (14V)	1
	19990(28V)	. TUNER ASSEMBLY (28V)	1
		(ATTACHING PARTS)	
-1	103(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg	2
-2	10353	. WASHER, Spring tension	2
-3	104(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg	1
-4	7730	. WASHER, Spring tension	1
-5	504(1-5/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1-5/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-6	20733	. . CONTACT SHIELD	1
		(ATTACHING PARTS)	
-7	503(5/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-8	19664	. . RELAY, Armature (14V)	1
-8	19665	. . RELAY, Armature (28V)	1
-8A	17633	. . SEMICONDUCTOR DEVICE, Diode, type 1N462 (used beginning with M-6 units)	1
		(ATTACHING PARTS)	
-9	503(5/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-10	314(1/4)	. . SETSCREW, Fluted socket dr, cone point, sst, 4-40 thd by 1/4 in. lg	4
-11	21477	. . SPRING, Helical, extension	1
-12	21504	. . SPRING, Helical, extension	1
	19674	. . LEVER ASSEMBLY (Right hand)	1
		(ATTACHING PARTS)	
-13	17326	. . RING, Retaining (WKI)(5133-12-C-MC)	1
-14	17768	. . WASHER, Flat, sst, 0.128 ID by 0.187 OD by 0.003 in. thk	AR
		- - - * - - -	
-15	19568	. . . PAWL (Right hand)	1
		(ATTACHING PARTS)	
-16	103(1/4)	. . . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg	1
-17	5727	. . . WASHER, Spring tension	1
-18	19574	. . . WASHER, Shouldered	1
-19	17742	. . . RING, Retaining (WKI)(5100-18-C)	1
-20	19551	. . . POST, Threaded	1
		- - - * - - -	
-21	19570	. . . SPRING, Helical, torsion	1
-22	—	. . . LEVER, c/o 1 bearing 19435, 1 washer 19559, 1 stud 19563, 1 stud 19560, 1 collar 19561, 1 arm 19562, 1 pin 19583, 1 ball bearing 13749, 1 washer 10241, 1 post 19436, 1 lever 19557, all staked together	1
-23	19571	. . PAWL (Right hand)	1
		(ATTACHING PARTS)	
-24	17742	. . RING, Retaining (WKI)(5100-18-C)	1
-25	17765	. . WASHER, Flat, sst, 0.190 ID by 0.234 OD by 0.003 in. thk	AR
		- - - * - - -	
-26	19566	. . SPRING, Helical, torsion	1
-27	19442	. . SPRING, Helical, extension	2
-28	15181	. . NUT	1
-29	16088	. . WASHER	1
-30	19572	. . PLATE, Indexing	1
-31	19447	. . RATCHET ASSEMBLY (Right hand)	1
-32	19573	. . BUSHING	1
-33	19478	. . STUD, Threaded, No. 1/4-32 NEF-2	1
-34	16088	. . WASHER	2
-35	19443	. . PLATE.	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-36	20624	. . BEARING, Ball (ND)(SSRS77NR4HG-Z-D-1228E)	1
		(ATTACHING PARTS)	
-37	20623	. . RING, Retaining (WKI)(5101-62-W)	1
-38	20622	. . WASHER, Flat, al aly, 0.630 ID by 0.844 OD by 0.032 in. thk	1
		- - - * - - -	
-39	19374	. . POST	2
-40	19336	. . PLATE, Contact	1
-41	20304	. . PANEL	1
-42	19650	. SPRING, Tension	1
		(ATTACHING PARTS)	
-43	503(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-44	19625	. DIAL	1
-45	19658(*)[1]	. CRYSTAL UNIT, Quartz	18
-45A	19460	. PLATE ASSEMBLY	1
		(ATTACHING PARTS)	
-45B	336(1/8)	. SETSCREW, Fluted socket dr, fp, sst, 6-32 thd by 1/8 in. lg (supplied with 45A, Figure 4)	2
-45C	10274	. DISC	2
		- - - * - - -	
-46	200(47)	. RESISTOR, Fixed, comp, 47 ohms ±10 per cent, 1/4w (AB)(CB4701)	1
	19942	. PLATE ASSEMBLY, RF	1
		(ATTACHING PARTS)	
-47	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
-48	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-49	8278	. . CAPACITOR, Fixed, ceramic, 3 $\mu\mu$f ±0.25 $\mu\mu$f	2
-50	19946	. . CAPACITOR, Trimmer	2
		(ATTACHING PARTS)	
-51	502(5/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 2-56 thd by 5/32 in. lg (SH)(SEMS)	4
		- - - * - - -	
-52	20620	. . BEARING, Ball (ND)(SSRS77NR3HG-ZD-1228E)	1
		(ATTACHING PARTS)	
-53	20625	. . RING, Retaining (WKI)(5101-56-W)	1
-54	20621	. . WASHER, Flat, al aly, 0.565 ID by 0.781 OD by 0.032 in. thk	1
		- - - * - - -	
-55	19943	. . PLATE	1
-56	19892	. PLATE	2
		(ATTACHING PARTS)	
-57	4058	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg	22
		- - - * - - -	
-58	19879	. PLATE	1
		(ATTACHING PARTS)	
-59	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
	19685	. SHAFT SUBASSEMBLY.	1
		(ATTACHING PARTS)	
-60	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
-61	7117	. WASHER, Flat, sst, 0.192 ID by 0.281 OD by 0.005 in. thk	AR
-62	21478	. WASHER, Flat, brs, ni pl, 0.191 ID by 0.281 OD by 0.020 in. thk	AR
		- - - * - - -	
-63	19688	. . CAM.	1
		(ATTACHING PARTS)	
-64	8775(5/16)	. . PIN (ESNA)(79-012-062)	1
		- - - * - - -	
-65	19686	. . ARM.	1
-66	19681	. . GEAR, Spur	1

[1]Insert frequency in megacycles in place of (*) to complete part number.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
4-67	16171	. . RING, Retaining (WKI)(5100-25-W)	1
-68	306(3/16)	. . SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 3/16 . in. lg	2
		- - - * - - -	
-69	19687	. . SHAFT.	1
	19716	. PLATE ASSEMBLY, Variable IF	1
		(ATTACHING PARTS)	
-70	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-71	200(680)	. . RESISTOR, Fixed, comp, 680 ohms ±10 per cent, 1/4w (AB) . . (CB6811)	1
-72	8554	. . CAPACITOR, Fixed, ceramic, 2700 μμf ±10 per cent, 500 vdcw.	1
-73	8837	. . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw . . (CLD)(TWA3S1GS-10)	1
-74	201(22K)	. . RESISTOR, Fixed, comp, 22,000 ohms ±5 per cent, 1/2w (AB) . (EB2235)	1
-75	8848	. . CAPACITOR, Fixed, mica, 91 μμf ±1 per cent, 500 vdcw. . . . (EMM)(VTDM-15-91)	1
-76	200(82K)	. . RESISTOR, Fixed, comp, 82,000 ohms ±10 per cent, 1/4w (AB) . (CB8231)	1
-77	8879(0.82)	. . CAPACITOR, Fixed, electrolytic, 0.82 μμf ±5 per cent, 500 . . vdcw (STL)(GA)	1
-78	8848	. . CAPACITOR, Fixed, mica, 91 μμf ±1 per cent, 500 vdcw (EMM). (VTDM-15-91)	1
-79	200(82K)	. . RESISTOR, Fixed, comp, 82,000 ohms ±10 per cent, 1/4w (AB) . (CB8231)	1
-80	201(100K)	. . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . (EB1045)	1
-81	8835	. . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw . . (CLD)(TWA3S1-10)	1
-82	700-132	. . ELECTRON TUBE, Type 5899	1
-83	19732	. . TUNING ARM.	1
-84	19871	. . SPRING, Helical, compression.	1
-85	19698	. . TUNING SLUG	2
-86	19869	. . SPRING, Helical, compression.	1
-87	19715	. . COIL, Variable inductor. . . . . (ATTACHING PARTS)	2
-88	4697	. . NUT, Serrated	2
-89	8540	. . WASHER, Lock, 0.384 ID by 0.500 OD by 0.022 in. thk (SH). . . (1920-02)	2
		- - - * - - -	
-90	19724	. . BEARING	1
-91	201(27K)	. . RESISTOR, Fixed, comp, 27,000 ohms ±5 per cent, 1/2w (AB) . (EB2735)	1
-92	8835	. . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw . . (CLD)(TWA3S1-10)	1
-93	201(100K)	. . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . (EB1045)	1
-94	8835	. . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw . . (CLD)(TWA3S1-10)	1
-95	8627(0.022)	. . CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 . . . vdcw (AB)(40-223W)	1
-96	8877(15)	. . CHOKE, RF, 15 μh ±20 per cent (JFE)(10100-620)	1
-97	19692	. . PLATE	1
-98	19968	. TRANSFORMER, IF . . . . . (ATTACHING PARTS)	1
-99	502(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 2-56 thd by 7/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
	19944	. PLATE ASSEMBLY, RF Middle.	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
4-100	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	4
-101	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-102	19950	. . GEAR, Spur	1
		(ATTACHING PARTS)	
-103	17742	. . RING, Retaining (WKI)(5100-18-C)	1
-104	3684	. . WASHER, Beveled	1
		- - - * - - -	
-105	20620	. . BEARING, Ball (ND)(SSRS77NR3HG-ZD1228E)	2
		(ATTACHING PARTS)	
-106	20625	. . RING, Retaining (WKI)(5101-56-W)	2
-107	20621	. . WASHER, Flat, al aly, 0.565 ID by 0.781 OD by 0.032 in. thk	1
		- - - * - - -	
-108	8877(0.68)	. . CHOKE, RF, 0.68 μh ±20 per cent (JFE)(10100-628)	1
-109	8535	. . CAPACITOR, Fixed, ceramic, 250 $\mu\mu$f ±20 per cent, 500 vdcw (CN)(BU20251MV5V)	1
-110	21303	. . TERMINAL ASSEMBLY	1
		(ATTACHING PARTS)	
-111	103(1/2)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/2 in. lg	2
-112	4561	. . NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk	2
-113	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-114	19945	. . PLATE	1

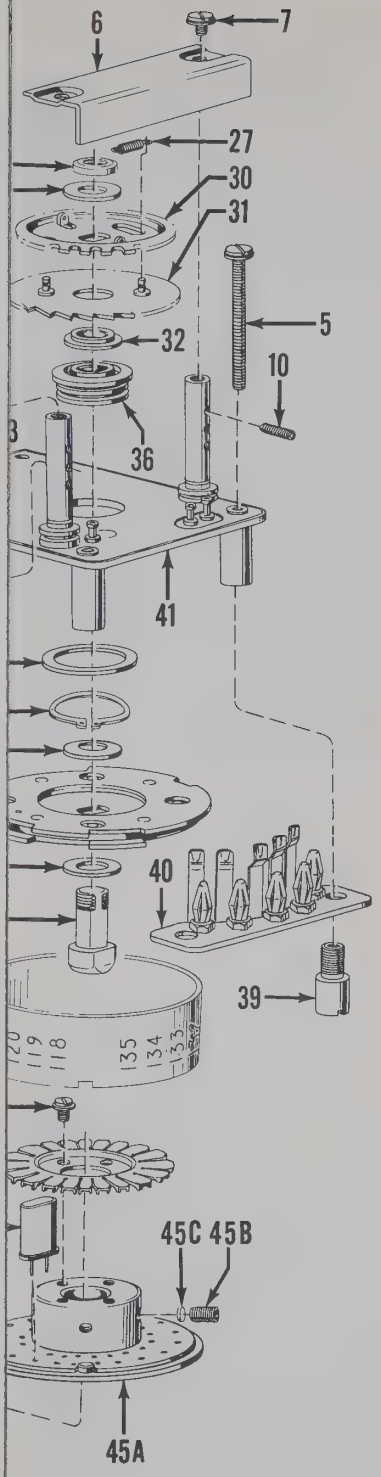


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Figure 4. Receiver Assembly
(Sheet 1 of 2)

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
4-100	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	4
-101	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-102	19950	. . GEAR, Spur	1
		(ATTACHING PARTS)	
-103	17742	. . RING, Retaining (WKI)(5100-18-C)	1
-104	3684	. . WASHER, Beveled	1
		- - - * - - -	
-105	20620	. . BEARING, Ball (ND)(SSRS77NR3HG-ZD1228E)	2
		(ATTACHING PARTS)	
-106	20625	. . RING, Retaining (WKI)(5101-56-W)	2
-107	20621	. . WASHER, Flat, al aly, 0.565 ID by 0.781 OD by 0.032 in. thk	1
		- - - * - - -	
-108	8877(0.68)	. . CHOKE, RF, 0.68 μh ±20 per cent (JFE)(10100-628)	1
-109	8535	. . CAPACITOR, Fixed, ceramic, 250 $\mu\mu$f ±20 per cent, 500 vdcw (CN)(BU20251MV5V)	1
-110	21303	. . TERMINAL ASSEMBLY	1
		(ATTACHING PARTS)	
-111	103(1/2)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/2 in. lg	2
-112	4561	. . NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk	2
-113	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-114	19945	. . PLATE	1

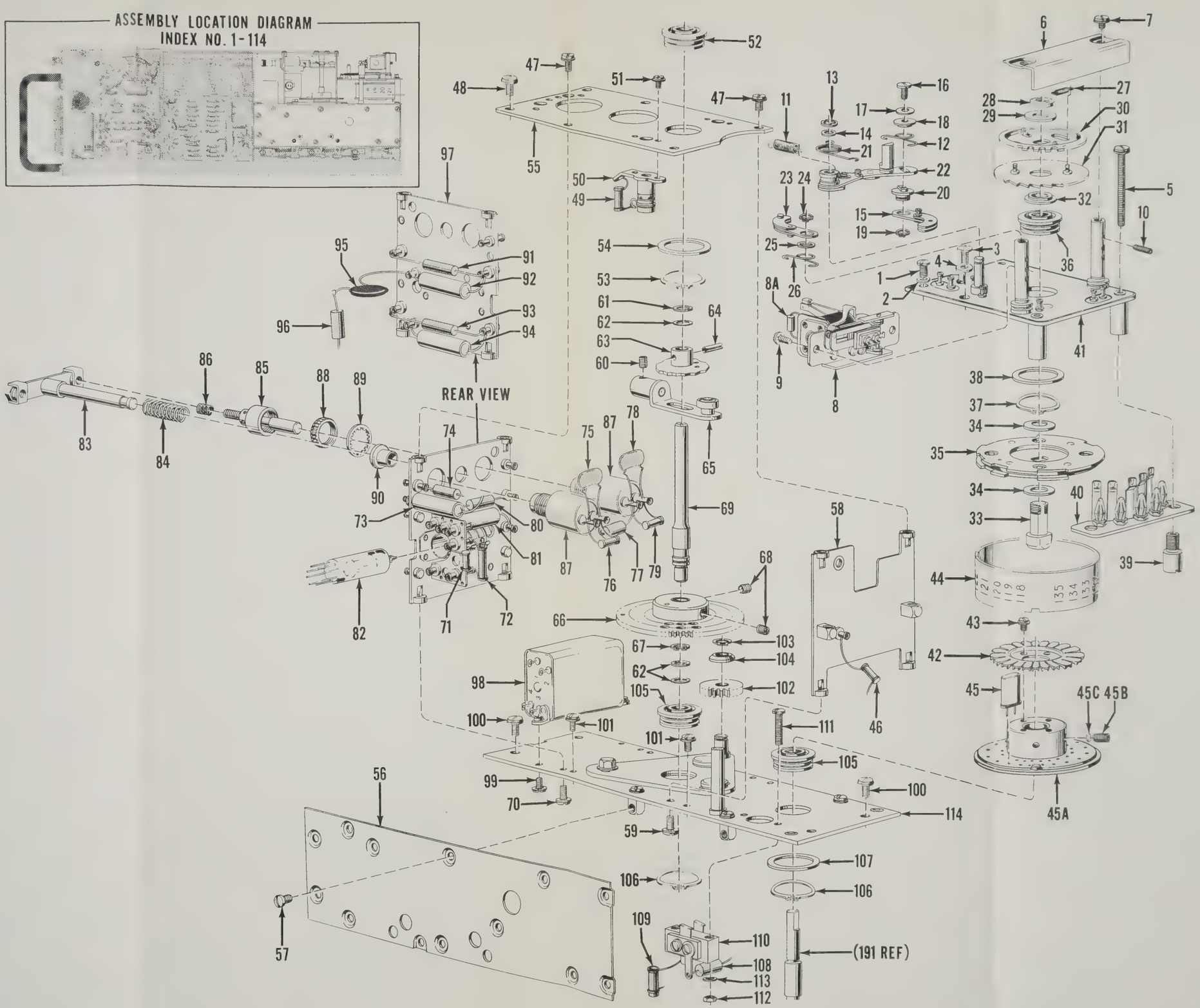
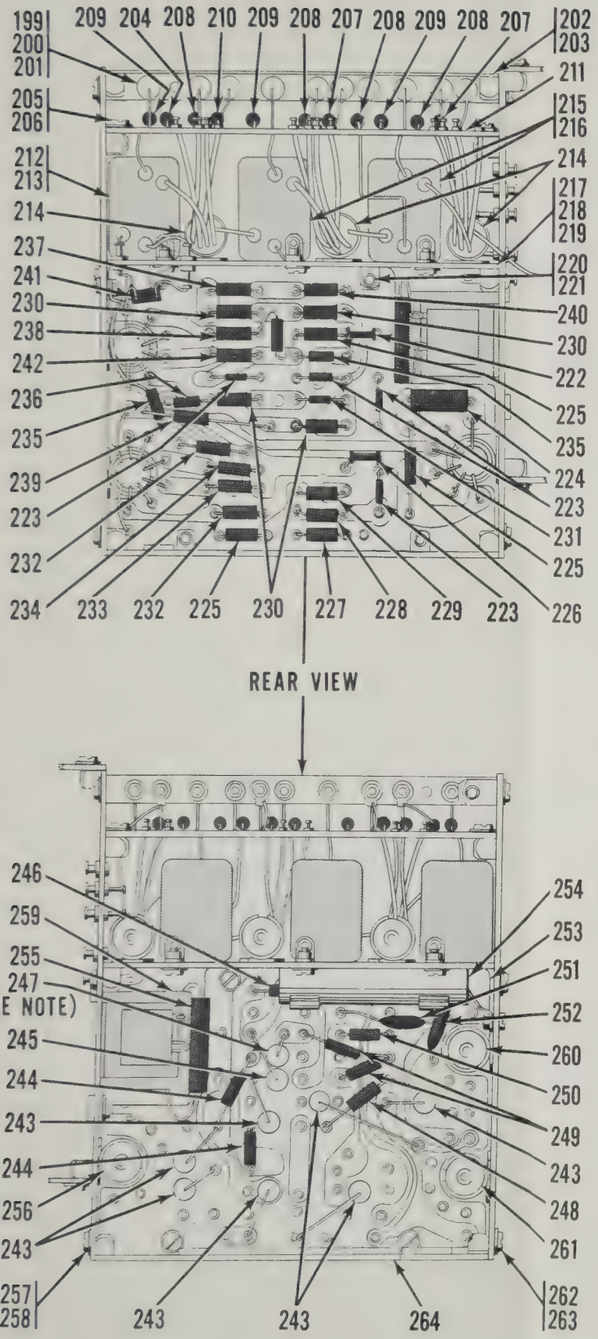
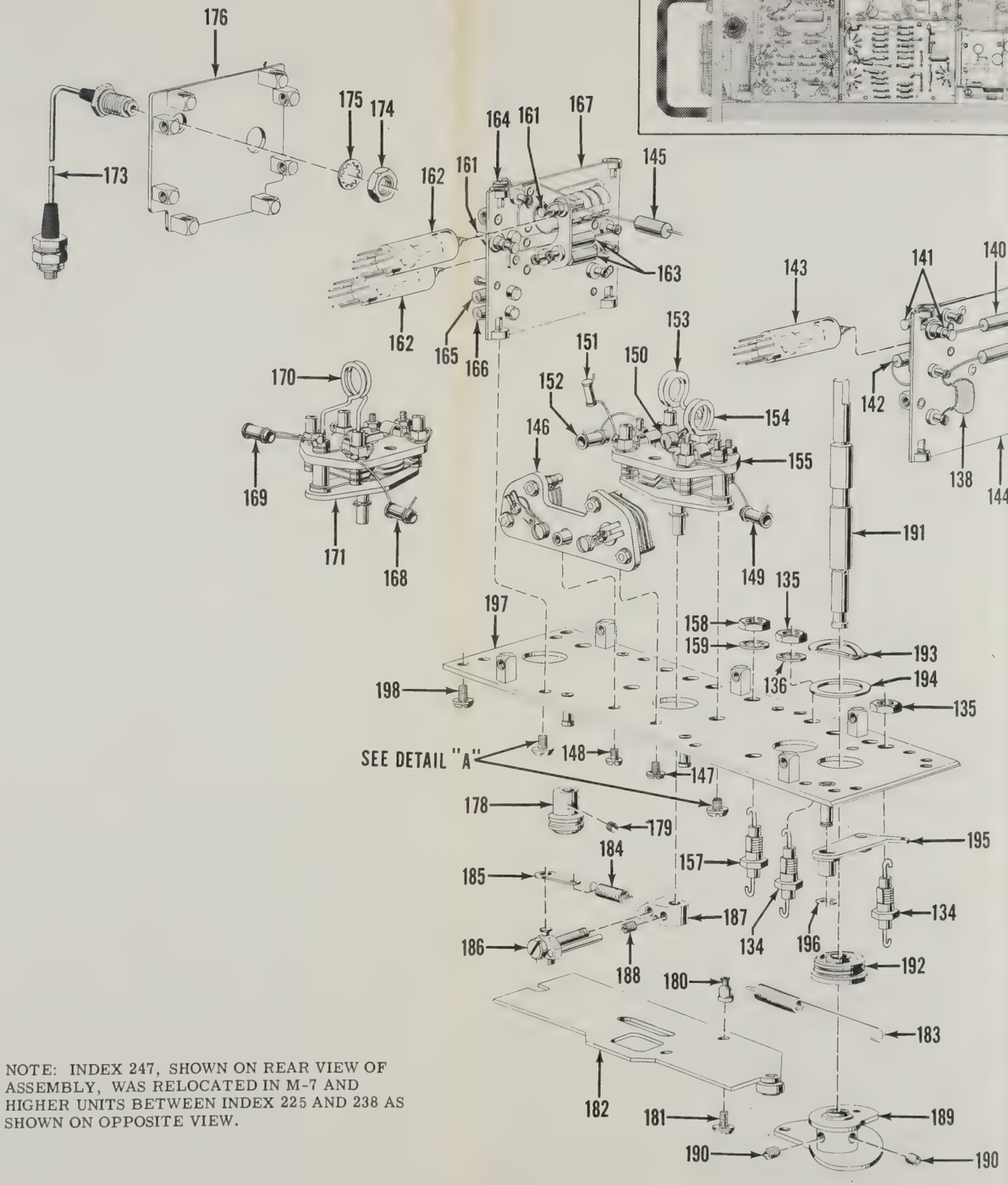


Figure 4. Receiver Assembly
(Sheet 1 of 2)

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
	19884	. PLATE ASSEMBLY, Oscillator	1
		(ATTACHING PARTS)	
4-115	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-116	201(1500)	. . RESISTOR, Fixed, comp, 1500 ohms ±5 per cent, 1/2w (AB) . . (EB1525)	1
-117	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw. (SLM)(CF-100-2-1022)	2
-118	19603	. . CAPACITOR, Variable, air dielectric.	1
		(ATTACHING PARTS)	
-119	103(3/16)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg. .	2
		- - - * - - -	
-120	200(220)	. . RESISTOR, Fixed, comp, 220 ohms ±10 per cent, 1/4w (AB) . . (CB2211)	2
-121	8870(51)	. . CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM). (VTDM-15-51)	2
-122	200(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w (AB) . (CB3331)	1
-123	204(10)	. . RESISTOR, Fixed, comp, 10 ohms ±10 per cent, 1/4w (GBR) . . (997CX10)	1
-124	8877(3.3)	. . CHOKE, RF, 3.3 μh ±10 per cent (JFE)(10102-620).	1
-125	201(3300)	. . RESISTOR, Fixed, comp, 3300 ohms ±5 per cent, 1/2w (AB) . . (EB3325)	1
-126	700(136)	. . ELECTRON TUBE, Type 6021	1
-127	19883	. . PLATE	1
-128	8870(100)	. CAPACITOR, Fixed, mica, 100 μμf ±5 per cent, 500 vdcw (EMM) . (VTDM-15-100)	1
-129	8765(7)	. CAPACITOR, Fixed, ceramic, 7 μμf ±0.25 μμf, 500 vdcw, MIL . . type CC20HH070C	1
-130	19920	. COIL, RF.	1
-131	19923	. COIL, RF.	1
-132	19929	. CAPACITOR, Variable, air dielectric	1
		(ATTACHING PARTS)	
-133	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . . .	2
		- - - * - - -	
-134	14143	. CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw . . (ERC)(357)	2
		(ATTACHING PARTS)	
-135	—	. NUT, Hexagon, 12-28 thd, (supplied with 117, Figure 4).	2
-136	21319	. WASHER, Lock, ph brz, ni pl, 0.226 ID by 0.400 OD by 0.022 in. thk	1
		- - - * - - -	
	19874	. PLATE ASSEMBLY, Mixer.	1
		(ATTACHING PARTS)	
-137	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-138	8870(51)	. . CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM). (VTDM-15-51)	1
-139	201(680)	. . RESISTOR, Fixed, comp, 680 ohms ±5 per cent, 1/2w (AB) . . . (EB6815)	1
-140	201(150K)	. . RESISTOR, Fixed, comp, 150,000 ohms ±5 per cent, 1/2w . . . (AB)(EB1545)	1
-141	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw. (SLM)(CF-100-2-1022)	2
-142	201(100K)	. . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . (EB1045)	1
-143	700(132)	. . ELECTRON TUBE, Type 5899	1
-144	19873	. . PLATE	1
-145	8877(15)	. CHOKE, 15 μh ±10 per cent (JFE)(10102-636).	1



NOTE: INDEX 247, SHOWN ON REAR VIEW OF ASSEMBLY, WAS RELOCATED IN M-7 AND HIGHER UNITS BETWEEN INDEX 225 AND 238 AS SHOWN ON OPPOSITE VIEW.



TP1609

Figure 4. Receiver Assembly
(Sheet 2 of 2)

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
	19884	. PLATE ASSEMBLY, Oscillator	1
		(ATTACHING PARTS)	
4-115	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-116	201(1500)	. . RESISTOR, Fixed, comp, 1500 ohms ±5 per cent, 1/2w (AB) (EB1525)	1
-117	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw. (SLM)(CF-100-2-1022)	2
-118	19603	. . CAPACITOR, Variable, air dielectric.	1
		(ATTACHING PARTS)	
-119	103(3/16)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg.	2
		- - - * - - -	
-120	200(220)	. . RESISTOR, Fixed, comp, 220 ohms ±10 per cent, 1/4w (AB) (CB2211)	2
-121	8870(51)	. . CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM). (VTDM-15-51)	2
-122	200(33K)	. . RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w (AB) (CB3331)	1
-123	204(10)	. . RESISTOR, Fixed, comp, 10 ohms ±10 per cent, 1/4w (GBR) (997CX10)	1
-124	8877(3.3)	. . CHOKE, RF, 3.3 μh ±10 per cent (JFE)(10102-620).	1
-125	201(3300)	. . RESISTOR, Fixed, comp, 3300 ohms ±5 per cent, 1/2w (AB) (EB3325)	1
-126	700(136)	. . ELECTRON TUBE, Type 6021	1
-127	19883	. . PLATE	1
-128	8870(100)	. CAPACITOR, Fixed, mica, 100 μμf ±5 per cent, 500 vdcw (EMM) (VTDM-15-100)	1
-129	8765(7)	. CAPACITOR, Fixed, ceramic, 7 μμf ±0.25 μμf, 500 vdcw, MIL type CC20HH070C	1
-130	19920	. COIL, RF.	1
-131	19923	. COIL, RF.	1
-132	19929	. CAPACITOR, Variable, air dielectric	1
		(ATTACHING PARTS)	
-133	104(3/16)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg	2
		- - - * - - -	
-134	14143	. CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw (ERC)(357)	2
		(ATTACHING PARTS)	
-135	—	. NUT, Hexagon, 12-28 thd, (supplied with 117, Figure 4).	2
-136	21319	. WASHER, Lock, ph brz, ni pl, 0.226 ID by 0.400 OD by 0.022 in. thk	1
		- - - * - - -	
	19874	. PLATE ASSEMBLY, Mixer.	1
		(ATTACHING PARTS)	
-137	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-138	8870(51)	. . CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM). (VTDM-15-51)	1
-139	201(680)	. . RESISTOR, Fixed, comp, 680 ohms ±5 per cent, 1/2w (AB) (EB6815)	1
-140	201(150K)	. . RESISTOR, Fixed, comp, 150,000 ohms ±5 per cent, 1/2w (AB)(EB1545)	1
-141	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw. (SLM)(CF-100-2-1022)	2
-142	201(100K)	. . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) (EB1045)	1
-143	700(132)	. . ELECTRON TUBE, Type 5899	1
-144	19873	. . PLATE	1
-145	8877(15)	. CHOKE, 15 μh ±10 per cent (JFE)(10102-636).	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-146	19897	. CAPACITOR, Variable, air dielectric	1
		(ATTACHING PARTS)	
-147	503(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, .	1
		3-48 thd by 3/16 in. lg (SH)(SEMS)	
-148	103(5/32)	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 5/32 in. lg . . .	1
		- - - * - - -	
-149	8363	. CAPACITOR, Fixed, ceramic, 15 $\mu\mu$f ±5 per cent (CN)(type D-15) .	1
-150	8879(0.39)	. CAPACITOR, Fixed, electrolytic, 0.39 $\mu\mu$f ±5 per cent, 500 vdcw .	1
		(STL)(GA)	
-151	200(47)	. RESISTOR, Fixed, comp, 47 ohms ±10 per cent, 1/4w (AB)(CB4701)	1
-152	8541	. CAPACITOR, Fixed, ceramic, 100 $\mu\mu$f ±2 per cent (CN).	1
		(type D-100)	
-153	19921	. COIL	1
-154	19922	. COIL	1
-155	19929	. CAPACITOR, Variable.	1
		(ATTACHING PARTS)	
-156	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, .	2
		ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	
		- - - * - - -	
-157	14143	. CAPACITOR, Fixed, ceramic, 1000 $\mu\mu$f ±20 per cent, 500 vdcw . .	4
		(ERC)(357)	
		(ATTACHING PARTS)	
-158	—	. NUT, Hexagon, 12-28 thd, (supplied with 157, Figure 4).	4
-159	21319	. WASHER, Lock, ph brz, ni pl, 0.226 ID by 0.400 OD by 0.022 in. thk	
		- - - * - - -	
	19887	. PLATE ASSEMBLY, Cascode.	1
		(ATTACHING PARTS)	
-160	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, .	2
		ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	
		- - - * - - -	
-161	8832	. . CAPACITOR, Fixed, ceramic, 1000 $\mu\mu$f ±20 per cent, 500 vdcw.	2
		(SLM)(CF-100-2-1022)	
-162	700(122)	. . ELECTRON TUBE, Type 5718	2
-163	201(470K)	. . RESISTOR, Fixed, comp, 470,000 ohms ±5 per cent, 1/2w . . .	2
		(AB)(EB4745)	
-164	8877(0.22)	. . CHOKE, 0.22 μh ±20 per cent (JFE)(10100-622)	1
-165	201(100K)	. . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w . . .	1
		(AB)(EB1045)	
-166	201(100)	. . RESISTOR, Fixed, comp, 100 ohms ±5 per cent, 1/2w (AB) . . .	1
		(EB1015)	
-167	19888	. . PLATE	1
-168	8765(10)	. CAPACITOR, Fixed, ceramic, 10 $\mu\mu$f ±0.25 per cent, 500 vdcw, . .	1
		MIL type CC20HG100C	
-169	8363	. CAPACITOR, Fixed, ceramic, 15 $\mu\mu$f ±5 per cent (CN)(D-15) . . .	1
-170	19924	. COIL	1
-171	19929	. CAPACITOR, Variable, air dielectric	1
		(ATTACHING PARTS)	
-172	504(7/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, .	2
		ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	
		- - - * - - -	
-173	20301	. CABLE ASSEMBLY, Antenna	1
		(ATTACHING PARTS)	
-174	—	. NUT, Hexagon, brs, silver pl, 1/4-32 thd (supplied with 173, . . .	1
		Figure 4)	
-175	8661	. WASHER, Lock, sst, 0.261 ID by 0.402 OD by 0.018 in. thk (SH) . .	1
		(1714-05)	
		- - - * - - -	
-176	19676	. PLATE	1
		(ATTACHING PARTS)	
-177	104(7/32)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 7/32 in. lg . . .	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-178	19419	. BEARING	4
		(ATTACHING PARTS)	
-179	304(1/8)	. . SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	4
		- - - * - - -	
	19940	. PLATE ASSEMBLY, Tuner	1
-180	15453	. . TERMINAL, Stud	2
		(ATTACHING PARTS)	
-181	504(3/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 3/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-182	—	. . PLATE, c/o bearing 13749, washer 4550, and plate 19941	1
-183	19626	. SPRING, Helical, extension	1
-184	14785	. SPRING, Helical, extension	2
-185	4023	. TERMINAL, Lug (SH)(2522-6-1)	3
-186	19467	. ARM	3
-187	19645	. BLOCK	3
		(ATTACHING PARTS)	
-188	304(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	3
		- - - * - - -	
-189	20947	. CAM ASSEMBLY.	1
		(ATTACHING PARTS)	
-190	306(1/8)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/8 in. lg	2
		- - - * - - -	
-191	21482	. SHAFT	1
-192	20620	. BEARING, Ball (ND)(SSRS77NR3HGZD1228E)	1
		(ATTACHING PARTS)	
-193	20625	. RING, Retaining (WKI)(5101-56-W).	1
-194	21322	. WASHER, Flat, al aly, 0.565 ID by 0.781 OD by 0.032 in. thk	1
		- - - * - - -	
-195	19934	. LEVER ASSEMBLY	1
		(ATTACHING PARTS)	
-196	17326	. RING, Retaining (WKI)(5133-12-C-MF)	1
		- - - * - - -	
-197	19975	. PLATE	1
		(ATTACHING PARTS)	
-198	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
	20369	. FRAME ASSEMBLY	1
-199	8837	. . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD)(TWA3S1GS-10)	10
		(ATTACHING PARTS)	
-200	4561	. . NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk.	10
-201	4103	. . WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.025 in. thk (SH) (1703)	10
		- - - * - - -	
-202	19933	. . BRACKET.	1
		(ATTACHING PARTS)	
-203	503(1/4)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-204	21485(1)	. . CAPACITOR, Fixed, electrolytic, 1.0 μf ±20 per cent, 35 vdcw (SPR)(150D268B1)	1
	19979	. . PANEL ASSEMBLY	1
		(ATTACHING PARTS)	
-205	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg	4
-206	10353	. . WASHER, Spring tension	4
		- - - * - - -	
-207	201(470)	. . . RESISTOR, Fixed, comp, 470 ohms ±5 per cent, 1/2w (AB) (EB4715)	2
-208	201(100K)	. . . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) (EB1045)	4

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-209	201(15K)	. . . RESISTOR, Fixed, comp, 15,000 ohms ±5 per cent, 1/2w (AB). (EB1535)	3
-210	201(680)	. . . RESISTOR, Fixed, comp, 680 ohms ±5 per cent, 1/2w (AB) . . (EB6815)	1
-211	19978	. . . PANEL.	1
-212	21248	. . TRANSFORMER, IF . . . . . (ATTACHING PARTS)	1
-213	502(7/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 2-56 thd by 7/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-214	700(132)	. . ELECTRON TUBE (type 5899)	3
-215	19968	. . TRANSFORMER, IF . . . . . (ATTACHING PARTS)	2
-216	502(7/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 2-56 thd by 7/32 in. lg (SH)(SEMS)	4
		- - - * - - -	
	19959	. . PLATE . . . . . (ATTACHING PARTS)	1
-217	503(1/4)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
-218	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg. . .	2
-219	10353	. . WASHER, Spring tension	2
		- - - * - - -	
	20395	. . PANEL ASSEMBLY . . . . . (ATTACHING PARTS)	1
-220	103(1/4)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg. . .	2
-221	10353	. . WASHER, Spring tension	2
		- - - * - - -	
-222	200(1.5MEG)	. . . RESISTOR, Fixed, comp, 1.5 megohms ±10 per cent, 1/4w . . (AB)(CB1551)	1
-223	17633	. . . SEMICONDUCTOR DEVICE, Diode, type 1N462	4
-224	202(270)	. . . RESISTOR, Fixed, comp, 270 ohms ±5 per cent, 1w (AB) . . . (GB2715)	1
-225	201(470K)	. . . RESISTOR, Fixed, comp, 470,000 ohms ±5 per cent, 1/2w . . (AB)(EB4745)	3
-226	200(1MEG)	. . . RESISTOR, Fixed, comp, 1 megohm ±10 per cent, 1/4w (AB) . (CB1051)	1
-227	201(47K)	. . . RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent, 1/2w . . . (AB)(EB4735)	1
-228	201(680K)	. . . RESISTOR, Fixed, comp, 680,000 ohms ±5 per cent, 1/2w . . (AB)(EB6845)	1
-229	201(2MEG)	. . . RESISTOR, Fixed, comp, 2 megohms ±5 per cent, 1/2w (AB) . (EB2055)	1
-230	201(1MEG)	. . . RESISTOR, Fixed, comp, 1 megohm ±5 per cent, 1/2w (AB) . (EB1055)	4
-231	17953	. . . SEMICONDUCTOR DEVICE, Diode, type 1N459	1
-232	201(1.5MEG)	. . . RESISTOR, Fixed, comp, 1.5 megohms ±5 per cent, 1/2w . . (AB)(EB1555)	2
-233	201(10K)	. . . RESISTOR, Fixed, comp, 10,000 ohms ±5 per cent, 1/2w . . (AB)(EB1035)	1
-234	201(470)	. . . RESISTOR, Fixed, comp, 470 ohms ±5 per cent, 1/2w (AB). . (EB4715)	1
-235	21485(1)	. . . CAPACITOR, Fixed, electrolytic, 1 μf ±20 per cent, 35 vdcw. (SPR)(150D268B1)	2
-236	17953	. . . SEMICONDUCTOR DEVICE, Diode, type 1N459 (used beginning with M-7)	1
-237	201(330K)	. . . RESISTOR, Fixed, comp, 330,000 ohms ±5 per cent, 1/2w . . (AB)(EB3345)	1
-237	201(150K)	. . . RESISTOR, Fixed, comp, 150,000 ohms ±5 per cent, 1/2w . . (AB)(EB1545)(value change beginning with M-8)	1
-238	201(22K)	. . . RESISTOR, Fixed, comp, 22,000 ohms ±5 per cent, 1/2w . . (AB)(EB2235)	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
4-239	201(100K)	. . . . RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB)(EB1045)	1
-240	201(82K)	. . . . RESISTOR, Fixed, comp, 82,000 ohms ±5 per cent, 1/2w (AB)(EB8235)	1
-240	201(27K)	. . . . RESISTOR, Fixed, comp, 27,000 ohms ±5 per cent, 1/2w (AB)(EB2735)(value change beginning with M-8)	1
-241	8464	. . . . CAPACITOR, Fixed, ceramic, 1000 μμf, 500 vdcw (CN) (BU20-102N-Y5Y)	1
-241	8870(51)	. . . . CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM)(VTDM-15-51)(value change beginning with M-8)	1
-242	201(82K)	. . . . RESISTOR, Fixed, comp, 82,000 ohms ±5 per cent, 1/2w (AB)(EB8235)	1
-243	8837	. . . . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD)(TWA3S1GS-10)	7
-244	201(1MEG)	. . . . RESISTOR, Fixed, comp, 1 megohm ±5 per cent, 1/2w (AB). (EB1055)	2
-245	21965	. . . . CAPACITOR, Fixed, plastic, 0.047 μf ±20 per cent, 50 vdcw (CLD)(TWM104)	1
-246	8535	. . . . CAPACITOR, Fixed, ceramic, 250 μμf ±20 per cent, 500. vdcw (CN)(BC type A)	1
-246	8908(2200)	. . . . CAPACITOR, Fixed, mica, 2200 μμf ±5 per cent, 500 vdcw (EMM)(VTDM-19-2200)(value change beginning with M-8)	1
-247	[1]21965	. . . . CAPACITOR, Fixed, plastic, 0.047 μf ±20 per cent, 50 vdcw (CLD)(TWM104)(used in M-1 through M-7 units)	1
-247	[1]21485	. . . . CAPACITOR, Fixed, electrolytic, 0.15 μf ±20 per cent, 35 vdcw (SPR)(150D154X0035A2)(value change beginning with M-7)	1
-248	201(2.2MEG)	. . . . RESISTOR, Fixed, comp, 2.2 megohms ±5 per cent, 1/2w (AB)(EB2255)	1
-249	201(470K)	. . . . RESISTOR, Fixed, comp, 470,000 ohms ±5 per cent, 1/2w (AB)(EB4745)	2
-250	8626(4700)	. . . . CAPACITOR, Fixed, ceramic, 4700 μμf ±20 per cent, 500 vdcw (AB)(DS36-472W)	1
-251	8835	. . . . CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD)(TWA3S1-10)	1
-252	8870(100)	. . . . CAPACITOR, Fixed, mica, 100 μμf ±5 per cent, 500 vdcw (EMM)(VTDM-15-100)	1
-253	20396	. . . PANEL, Printed circuit.	1
-254	8777	. . CAPACITOR, Fixed, electrolytic, 12 μf +75 -15 per cent, 150 vdcw (SPR)(110D47)	1
-255	8890(0.022)	. . CAPACITOR, Fixed, paper, 0.022 μf ±20 per cent, 200 vdcw. (SPR)(196P22302S4)	1
-255	8835(0.01)	. . CAPACITOR, Fixed, plastic, 0.01 μf ±20 per cent, 300 vdcw (CLD)(TWA3S1-10)(value change beginning with M-7)	1
-256	700(133)	. . ELECTRON TUBE, Type 5902.	1
-257	19955	. . PLATE	1
		(ATTACHING PARTS)	
-258	503(1/4)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-259	20679	. . TRANSFORMER	1
-260	700(131)	. . ELECTRON TUBE, Type 5896	1
-261	700(139)	. . ELECTRON TUBE, Type 6112	1
-262	19961	. . PLATE	1
		(ATTACHING PARTS)	
-263	503(1/4)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-264	19954	. . PLATE	1

[1]In early M-7 units a 0.1-μf capacitor was used with a 0.47-μf capacitor to obtain the value of 0.15 μf; in later M-7 units and higher these capacitors were replaced with ARC-21485.

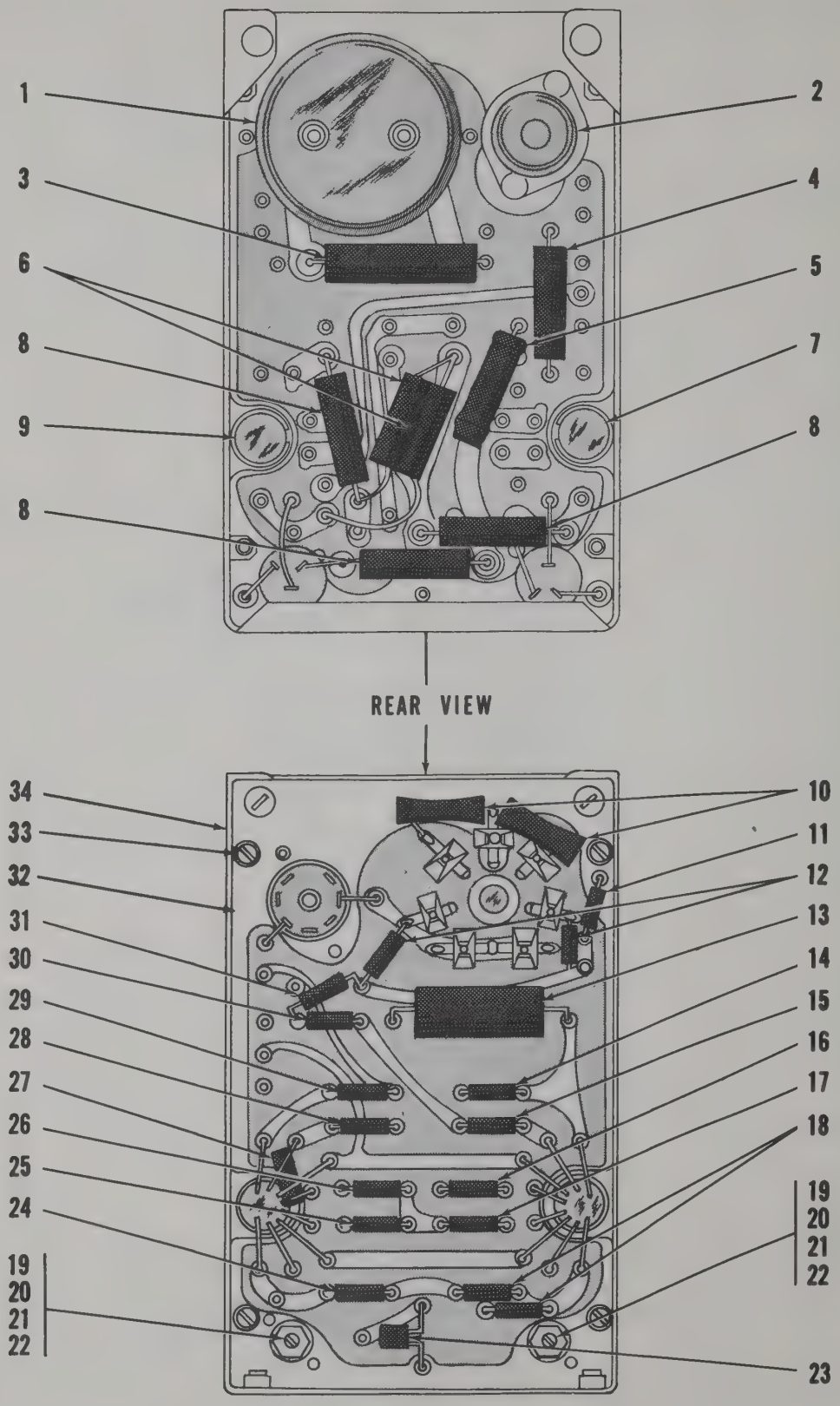


Figure 5. Modulator Assembly

TP1611

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
5-	20360	MODULATOR ASSEMBLY (see 18, Figure 2)	Ref
-1	700(143)	. ELECTRON TUBE, Type 6850	1
-2	700(103)	. ELECTRON TUBE, Type 0B2	1
-3	8836	. CAPACITOR, Fixed, paper, 0.047 μf ±20 per cent, 300 vdcw (CLD) . (TWA3S47-10)	1
-4	8835	. CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD) . (TWA3S1-10)	1
-5	8797(200)	. CAPACITOR, Fixed, ceramic, 200 μμf ±5 per cent, 500 vdcw. . . .	1
-6	8617(1000)	. CAPACITOR, Fixed, mica, 1000 μμf ±2 per cent, 500 vdcw (EMM) . (type VTCM20)	1
-7	700(136)	. ELECTRON TUBE, Type 6021	1
-8	8835	. CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD) . (TWA3S1-10)	3
-9	700(136)	. ELECTRON TUBE, Type 6021	1
-10	8796(120)	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw . . .	2
-11	201(27K)	. RESISTOR, Fixed, comp, 27,000 ohms ±5 per cent, 1/2w (AB) . . . (EB2735)	1
-12	201(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB). . . (EB1045)	2
-13	8836	. CAPACITOR, Fixed, paper, 0.047 μf ±20 per cent, 3 vdcw (CLD) . . (TWA3S47-10)	1
-14	201(47K)	. RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent (AB)(EB4735) . .	1
-15	201(1MEG)	. RESISTOR, Fixed, comp, 1 megohm ±5 per cent (AB)(EB1055) . . .	1
-16	201(2200)	. RESISTOR, Fixed, comp, 2200 ohms ±5 per cent, 1/2w (AB)(EB2225)	1
-17	201(1K)	. RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 1/2w (AB)(EB1025)	1
-18	201(47K)	. RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent (AB)(EB4735) . .	2
-19	8826	. RESISTOR, Variable, comp, 0 to 500,000 ohms ±20 per cent (AB) . . (GLU5042SD3028L)	2
		(ATTACHING PARTS)	
-20	—	. NUT, Hexagon, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	2
-21	—	. NUT, Plain, hex, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721) . . .	2
-22	—	. WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. dia (AB) . . (M4748)	2
		- - - * - - -	
-23	8874(7V)	. SEMICONDUCTOR DEVICE, Diode, silicon (TI)(653C4)	1
-24	201(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . . . (EB1045)	1
-25	201(1600)	. RESISTOR, Fixed, comp, 1600 ohms ±5 per cent, 1/2w (AB)(EB1625)	1
-26	201(2200)	. RESISTOR, Fixed, comp, 2200 ohms ±5 per cent, 1/2w (AB)(EB2225)	1
-27	8870(51)	. CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM) . . (VTDM-15-51)	1
-28	201(220K)	. RESISTOR, Fixed, comp, 220,000 ohms ±5 per cent, 1/2w (AB) . . (EB2245)	1
-29	201(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . . (EB1045)	1
-30	201(47K)	. RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent, 1/2w (AB) . . (EB4735)	1
-31	201(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±5 per cent, 1/2w (AB) . . (EB1045)	1
-32	20362	. PANEL, Printed circuit	1
		(ATTACHING PARTS)	
-33	503(5/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-34	19725	. BRACKET, Modulator	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-	19302(14V)	CHASSIS ASSEMBLY (14V)(see 20, Figure 2)	Ref
6-	19302(28V)	CHASSIS ASSEMBLY (28V)(see 20, Figure 2)	Ref
-1	19896	. RELAY ASSEMBLY (14V)	1
-1	19315	. RELAY ASSEMBLY (28V)	1
		(ATTACHING PARTS)	
-2	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-3	19318	. . CONNECTOR, Receptacle, electrical	1
-4	200(4700)	. RESISTOR, Fixed, comp, 4700 ohms ±10 per cent, 1/4w (AB) (CB4711)	1
-5	200(10K)	. RESISTOR, Fixed, comp, 10,000 ohms ±10 per cent, 1/4w (AB) (CB1031)	1
-6	200(100K)	. RESISTOR, Fixed, comp, 100,000 ohms ±10 per cent (AB)(CB1041).	1
-7	19663	. SEMICONDUCTOR DEVICE, Diode, type 1N90	1
-8	19662	. RELAY, 4pdt (GE)(CR2791G121A43)(14V)	1
-8	17635	. RELAY, 4pdt (GE)(3S2791G121A41)(28V)	1
		(ATTACHING PARTS)	
-9	4041	. NUT, Hexagon, brs, ni pl, 6-32 thd by 0.078 in. thk	3
-10	7742	. TERMINAL, Lug (SH)(2153-6)	3
-11	8488	. WASHER, Lock, sst, 0.145 ID by 0.280 OD by 0.018 in. thk. . . .	3
		- - - * - - -	
-12	8627(0.022)	. . CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw (AB)(40-223W)	1
-13	19345	. TRANSFORMER, Modulation (CMPB)(1942B)	1
		(ATTACHING PARTS)	
-14	504(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-15	19339	. CONNECTOR, Plug, electrical	3
-16	19342	. CONNECTOR, Plug, electrical	1
-17	19334	. PLATE.	1
		(ATTACHING PARTS)	
-18	504(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	7
-19	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	10
-20	506(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 6-32 thd by 1/4 in. lg (SH)(SEMS)	1
-21	21328	. STUD, Threaded	2
		- - - * - - -	
-22	12970	. GROMMET, Rubber (GOS)(614)	5
-23	20666	. CAPACITOR, Fixed, ceramic, 470 μμf ±20 per cent, 500 vdcw (ERC)(357)	1
		(ATTACHING PARTS)	
-24	—	. NUT, Hexagon, brs, cad pl, 12-28 thd by 3/32 in. thk (supplied with 23, Figure 6)	1
-25	8486	. WASHER, Lock, sst, 0.226 ID by 0.400 OD by 0.022 in. thk. . . . (SH)(1712)	1
		- - - * - - -	
-26	209(126)	. RESISTOR, Fixed, WW, 126 ohms ±3 per cent, 3w (DABU) . . . . (RS-2-126)	1
-27	19326	. PLATE	1
		(ATTACHING PARTS)	
-28	504(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	5
-29	104(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg . . .	2
-30	8497	. WASHER, Lock, sst, 0.119 ID by 0.260 OD by 0.016 in. thk . . .	2
-31	7710	. TERMINAL, Lug	1
-32	13039	. TERMINAL, Lug	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-33	8756	CAPACITOR, Fixed, paper, 470,000 μμf ±20 per cent, 400 vdcw (SPR)(186P47404T15)	1
		(ATTACHING PARTS)	
-34	—	NUT, Hexagon, 5/16-24 thd (SPR)(6-113)(supplied with 33, Figure 6)	1
-35	—	WASHER, Lock (SPR)(2-47)(supplied with 33, Figure 6)	1
		- - - * - - -	
-36	201(6800)	RESISTOR, Fixed, comp, 6800 ohms ±5 per cent, 1/2w (AB) (EB6825)(used beginning with M-8)	1
-37	8682	RESISTOR, Variable, comp, 0 to 50,000 ohms ±20 per cent, 0.33w (AB)(GLB5032SD3028L)	1
		(ATTACHING PARTS)	
-38	—	NUT, Lock, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	1
-39	—	NUT, Hexagon, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721)	1
-40	—	WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) (M4748)	1
		- - - * - - -	
-41	203(15K)	RESISTOR, Fixed, comp, 15,000 ohms ±5 per cent, 2w (AB) (HB1535)	1
-42	209(126)	RESISTOR, Fixed, WW, 126 ohms ±3 per cent, 3w (DABU) (RS-2-126)	1
-43	209(3)	RESISTOR, Fixed, WW, 3 ohms ±3 per cent, 3w (DABU)(RS-2-3)	1
-44	203(6800)	RESISTOR, Fixed, comp, 6800 ohms ±5 per cent, 2w (AB)(HB6825)	1
-45	203(1K)	RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 2w (AB)(HB1025)	1
-46	8796(120)	CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	2
-47	203(4700)	RESISTOR, Fixed, comp, 4700 ohms ±5 per cent, 2w (AB)(HB4725)	2
-48	210(9700)	RESISTOR, Fixed, WW, 9700 ohms ±3 per cent, 5w (DABU) (RSE-5-9.7)	1
-49	8627(0.022)	CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw (AB)(40-223W)	2
-50	201(220)	RESISTOR, Fixed, comp, 220 ohms ±5 per cent, 1/2w (AB)(EB2215)	1
-51	201(110)	RESISTOR, Fixed, comp, 110 ohms ±5 per cent, 1/2w (AB)(EB1115)	2
-52	21327	PLATE	1
		(ATTACHING PARTS)	
-53	504(7/16)	SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 7/16 in. lg (SH)(SEMS)	3
		- - - * - - -	
-54	8780	CAPACITOR, Fixed, tantalum, 60 μf +50 -15 per cent, 50 vdcw (CW39D061KSP)	2
-55	13886	HANDLE	1
		(ATTACHING PARTS)	
-56	509(1/2)	SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 10-32 thd by 1/2 in. lg (SH)(SEMS)	2
-57	21758	WASHER, Flat	1
		- - - * - - -	
-58	20407	BRACKET	1
		(ATTACHING PARTS)	
-59	508(3/8)	SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 8-32 thd by 3/8 in. lg (SH)(SEMS)	2
-60	168(5/16)	SCREW, Machine, fil hd, brs, ni pl, 8-32 thd by 5/16 in. lg	2
		- - - * - - -	
-61	19304	BASE	1
-62	20814	PLATE, Identification (14V)	1
-62	20815	PLATE, Identification (28V)	1
		(ATTACHING PARTS)	
-63	8081	SCREW, Tapping, thread forming, rh, Phillips dr, stl, blk parkerized, No. 2 by 5/32 in. lg (PK)(Z)	2
		- - - * - - -	
-64	12357	CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-65	5310	NUT, Knurled (supplied with 64, Figure 6)	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-66	14100	. EMBLEM.	1
		(ATTACHING PARTS)	
-67	8040	. NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk	1
-68	7730	. WASHER, Spring tension.	1
		- - - * - - -	
-69	8682	. RESISTOR, Variable, comp, 0 to 50,000 ohms ±20 per cent, 0.33w (AB)(GLB5032SD3028L)	1
		(ATTACHING PARTS)	
-70	—	. NUT, Lock, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	1
-71	—	. NUT, Hexagon, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721) . . .	1
-72	—	. WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . (M4748)	1
		- - - * - - -	
-73	8835	. CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD). (TWA3S1-10)	1
-74	8826	. RESISTOR, Variable, comp, 0 to 500,000 ohms ±20 per cent, 0.33w (AB)(GLU5042SD3028L)	1
		(ATTACHING PARTS)	
-75	—	. NUT, Lock, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	1
-76	—	. NUT, Hexagon, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721) . . .	1
-77	—	. WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . (M4748)	1
		- - - * - - -	
-78	8627(0.022)	. CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw . . (AB)(40-223W)	1
-79	7565	. JACK, Telephone	1
		(ATTACHING PARTS)	
-80	4697	. NUT, Knurled, brs, ni pl, 3/8-32 thd by 0.094 in. thk	1
-81	12517	. WASHER, Flat, brs, ni pl, 0.380 ID by 0.500 OD by 0.020 in. thk .	1
		- - - * - - -	
-82	201(220K)	. RESISTOR, Fixed, comp, 220,000 ohms ±5 per cent, 1/2w (AB) . . (EB2245)	1
-82	203(47K)	. RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent, 2w (AB) . . . (HB4735)(used beginning with M-8 units)	1
-83	9391	. JACK, Microphone	1
		(ATTACHING PARTS)	
-84	4697	. NUT, Round, brs, ni pl, 3/8-32 thd by 0.094 in. thk	1
-85	12517	. WASHER, Flat, brs, ni pl, 0.380 ID by 0.500 OD by 0.020 in. thk .	1
		- - - * - - -	
-86	12355	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-87	5131	. NUT, Knurled (supplied with 86, Figure 6).	1
		- - - * - - -	
-88	8683	. RESISTOR, Voltage sensitive (GE)(866B191G3)	1
-89	8627(0.022)	. CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw . . (AB)(40-223W)	1
-90	12348	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-91	5131	. NUT, Knurled (supplied with 90, Figure 6).	1
		- - - * - - -	
-92	20811	. CABLE ASSEMBLY	1
-93	20812	. CABLE ASSEMBLY	1
-94	19313	. PLATE, Front	1

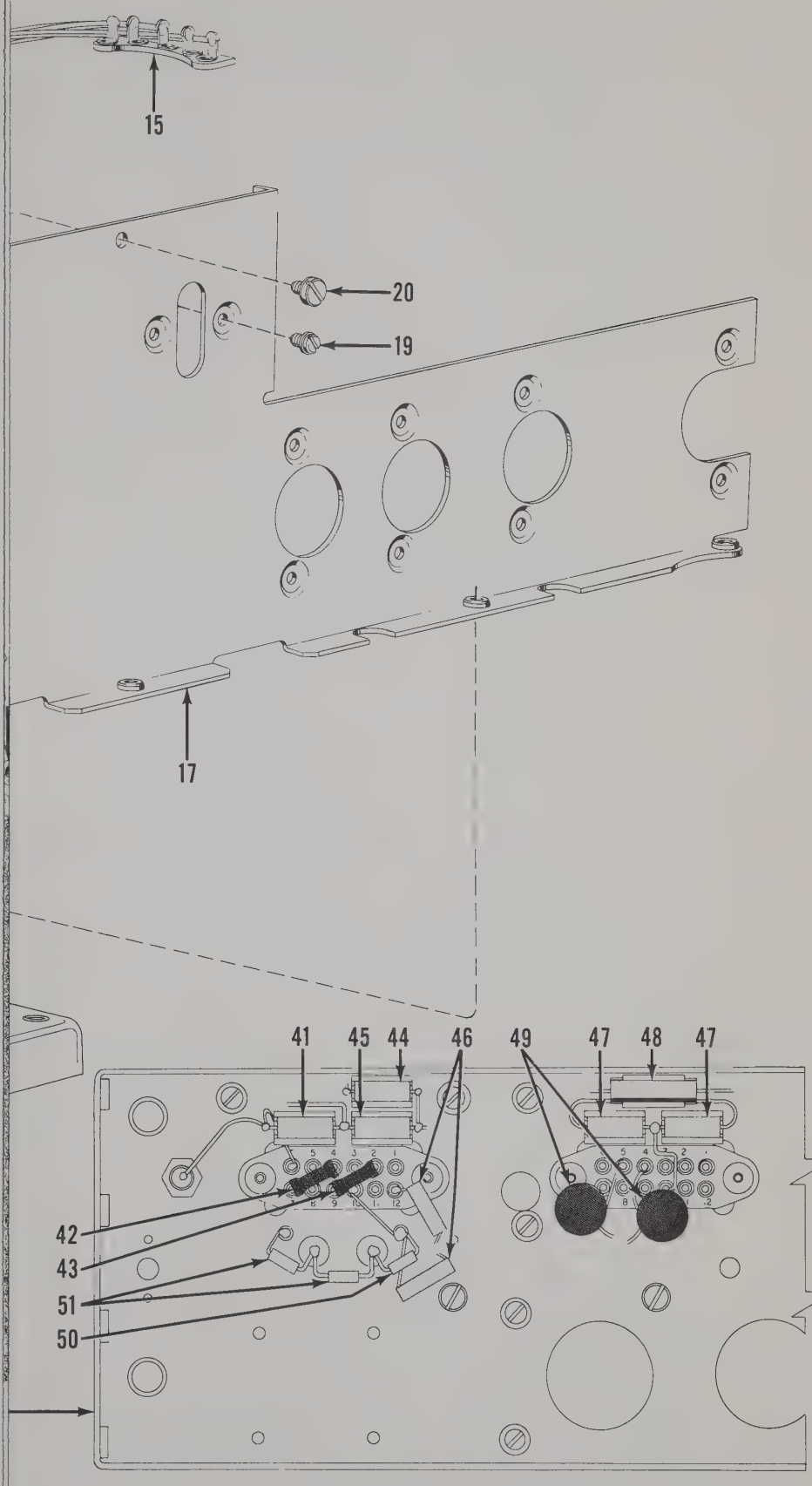
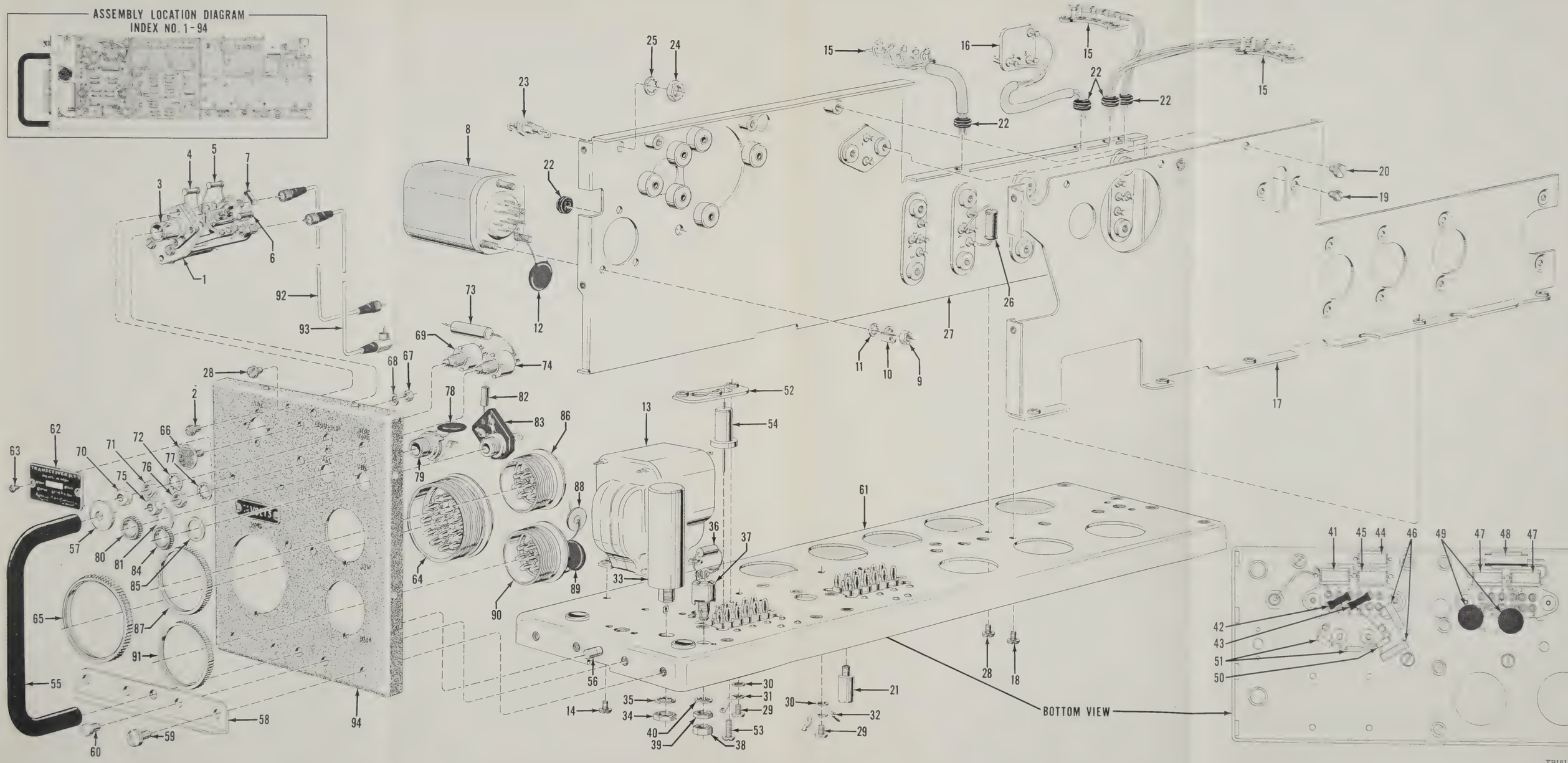


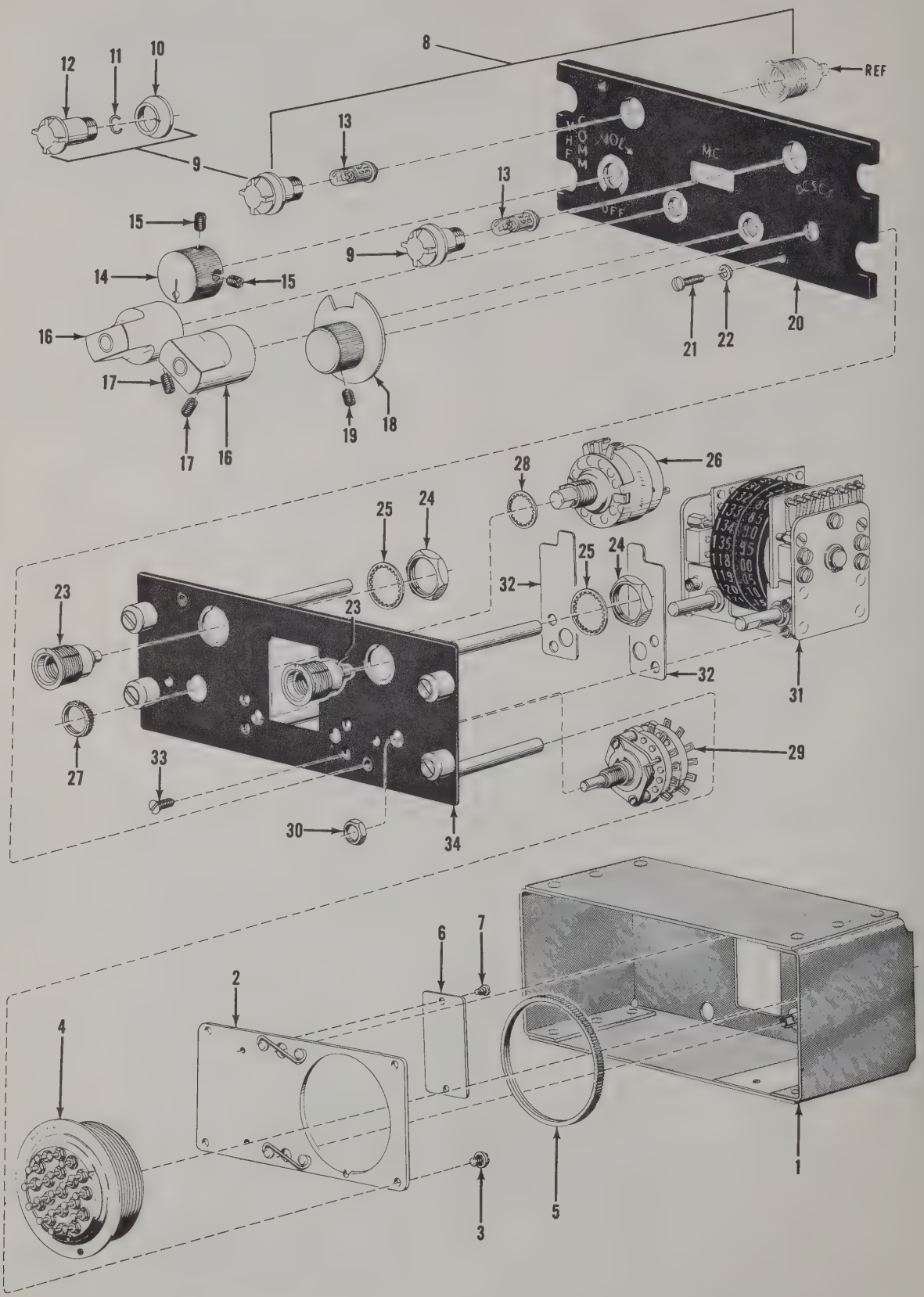
Figure 6. Chassis Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-66	14100	. EMBLEM.	1
		(ATTACHING PARTS)	
-67	8040	. NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk	1
-68	7730	. WASHER, Spring tension.	1
		- - - * - - -	
-69	8682	. RESISTOR, Variable, comp, 0 to 50,000 ohms ±20 per cent, 0.33w (AB)(GLB5032SD3028L)	1
		(ATTACHING PARTS)	
-70	—	. NUT, Lock, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	1
-71	—	. NUT, Hexagon, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721) . . .	1
-72	—	. WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . (M4748)	1
		- - - * - - -	
-73	8835	. CAPACITOR, Fixed, paper, 0.01 μf ±20 per cent, 300 vdcw (CLD). (TWA3S1-10)	1
-74	8826	. RESISTOR, Variable, comp, 0 to 500,000 ohms ±20 per cent, 0.33w (AB)(GLU5042SD3028L)	1
		(ATTACHING PARTS)	
-75	—	. NUT, Lock, sst, 1/4-32 thd by 11/64 in. thk (AB)(M4761)	1
-76	—	. NUT, Hexagon, sst, 1/4-32 thd by 0.078 in. thk (AB)(M4721) . . .	1
-77	—	. WASHER, Lock, sst, 0.250 ID by 0.402 OD by 0.018 in. thk (AB) . (M4748)	1
		- - - * - - -	
-78	8627(0.022)	. CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw . . (AB)(40-223W)	1
-79	7565	. JACK, Telephone	1
		(ATTACHING PARTS)	
-80	4697	. NUT, Knurled, brs, ni pl, 3/8-32 thd by 0.094 in. thk	1
-81	12517	. WASHER, Flat, brs, ni pl, 0.380 ID by 0.500 OD by 0.020 in. thk .	1
		- - - * - - -	
-82	201(220K)	. RESISTOR, Fixed, comp, 220,000 ohms ±5 per cent, 1/2w (AB) . . (EB2245)	1
-82	203(47K)	. RESISTOR, Fixed, comp, 47,000 ohms ±5 per cent, 2w (AB) . . . (HB4735)(used beginning with M-8 units)	1
-83	9391	. JACK, Microphone	1
		(ATTACHING PARTS)	
-84	4697	. NUT, Round, brs, ni pl, 3/8-32 thd by 0.094 in. thk	1
-85	12517	. WASHER, Flat, brs, ni pl, 0.380 ID by 0.500 OD by 0.020 in. thk .	1
		- - - * - - -	
-86	12355	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-87	5131	. NUT, Knurled (supplied with 86, Figure 6).	1
		- - - * - - -	
-88	8683	. RESISTOR, Voltage sensitive (GE)(866B191G3)	1
-89	8627(0.022)	. CAPACITOR, Fixed, ceramic, 0.022 μf ±20 per cent, 500 vdcw . . (AB)(40-223W)	1
-90	12348	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-91	5131	. NUT, Knurled (supplied with 90, Figure 6).	1
		- - - * - - -	
-92	20811	. CABLE ASSEMBLY	1
-93	20812	. CABLE ASSEMBLY	1
-94	19313	. PLATE, Front	1



TP1613

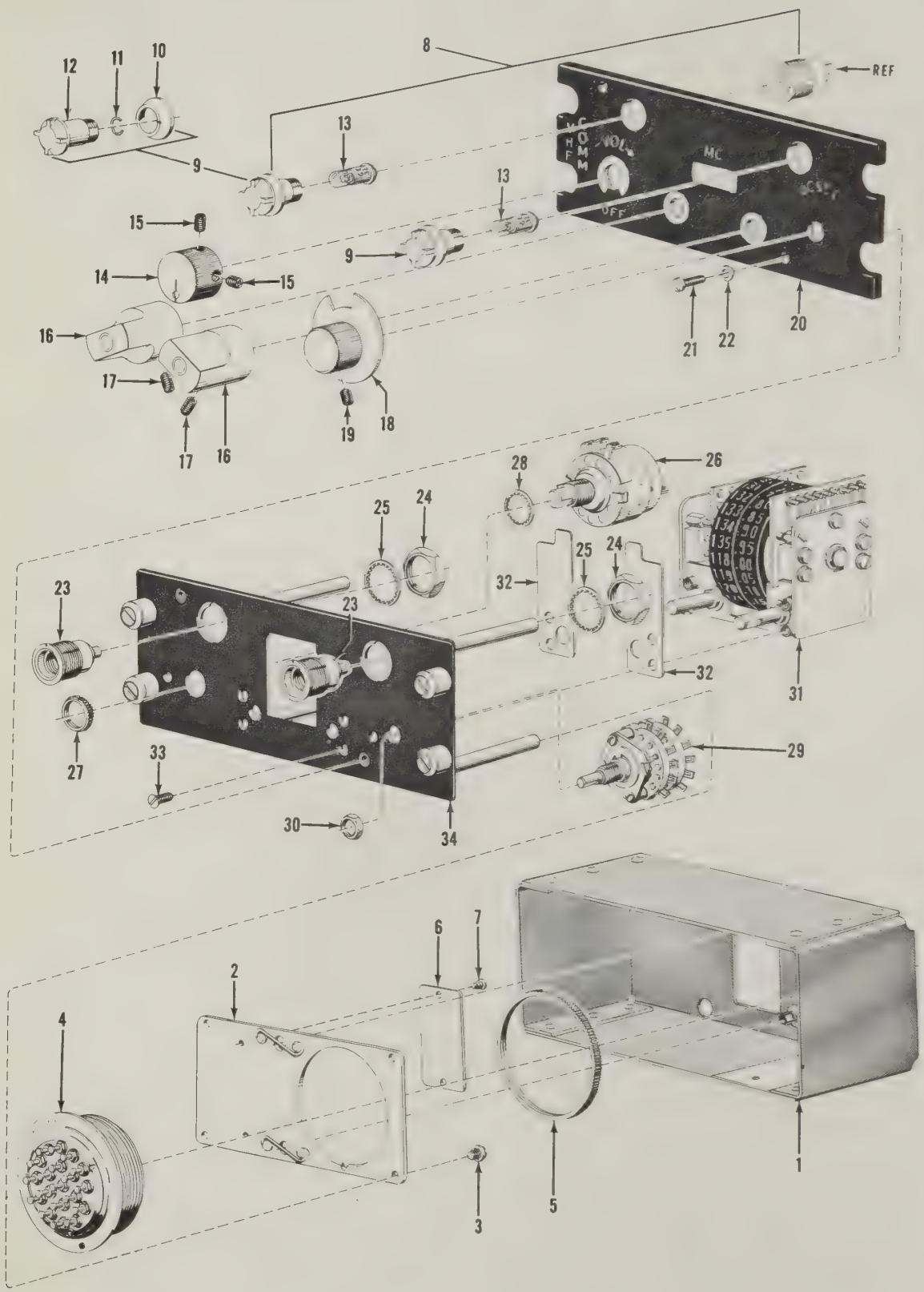
Figure 6. Chassis Assembly



TP1615

Figure 7. ARC Type C-67A Control Unit Assembly

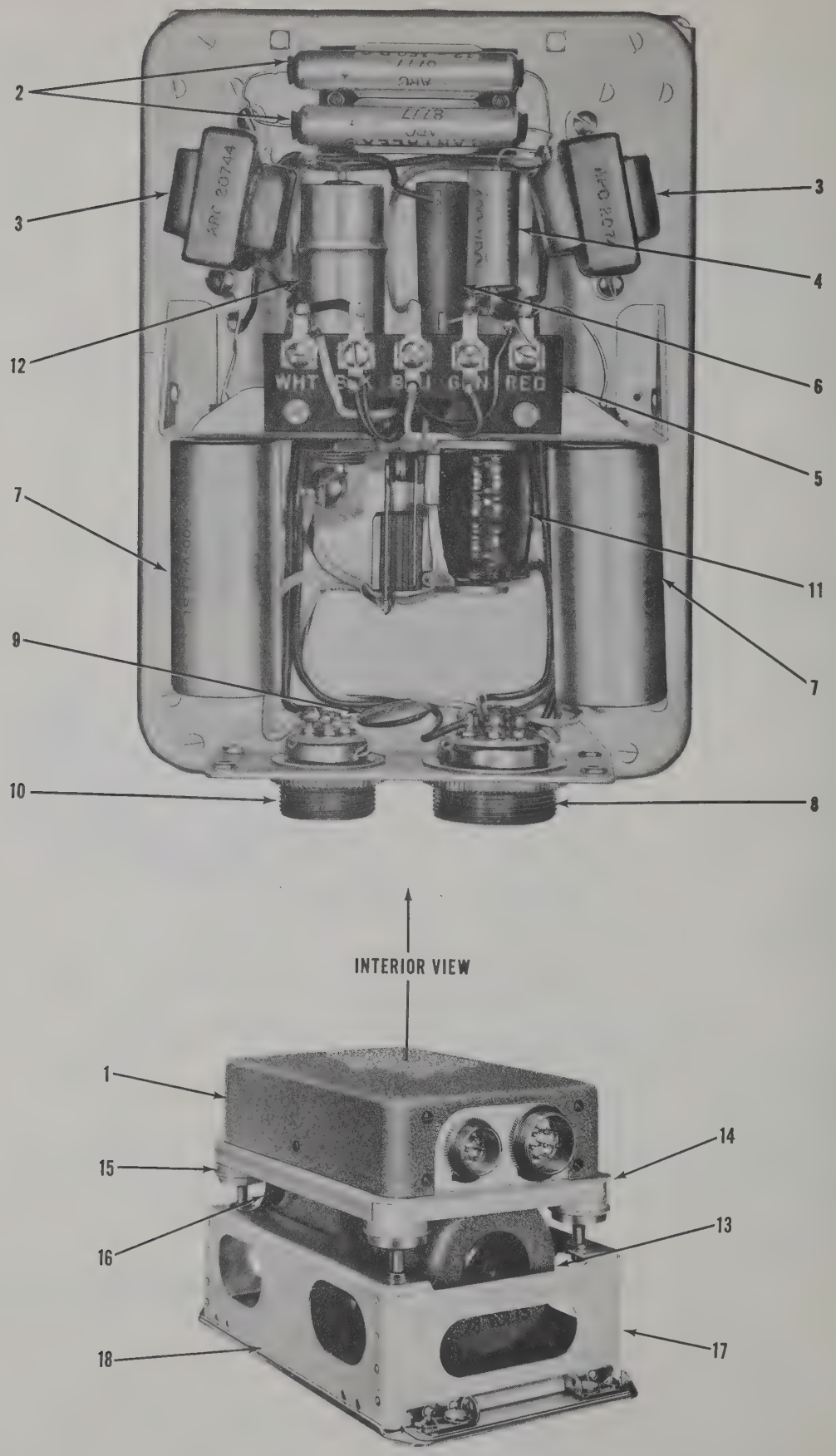
Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
7-	20350	CONTROL UNIT ASSEMBLY, ARC Type C-67A	1
-1	20375	. COVER ASSEMBLY	1
-2	20343	. PLATE ASSEMBLY, Mounting	1
		(ATTACHING PARTS)	
-3	503(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-4	12357	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-5	5310	. NUT, Knurled (supplied with 4, Figure 7)	1
		- - - * - - -	
-6	20349	. PLATE, Identification	1
		(ATTACHING PARTS)	
-7	8081	. SCREW, Tapping, thread forming, rh, Phillips dr, stl, blk parkerized, No. 2 by 5/32 in. lg (PK)(Z)	2
		- - - * - - -	
-8	16293	. LIGHT ASSEMBLY, Panel (GMC)(A-5890)	2
-9	—	. . LAMP HOUSING ASSEMBLY (GMC)(A-5181)	2
-10	—	. . . GROMMET, Panel light (GMC)(A-4846A)	2
-11	—	. . . SPRING, Lamp retainer (GMC)(A-3674).	2
-12	—	. . . LAMP HOUSING AND FILTER ASSEMBLY (GMC)(A-5178) . .	2
-13	8622	. LAMP, Incandescent, 28V, T-1-3/4 bulb (GE)(327)	2
-13	21760	. LAMP KIT, c/o two lamps (GE)(330)(for 14V model).	1
-14	16331	. KNOB	1
		(ATTACHING PARTS)	
-15	306(3/16)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	
-16	20403	. KNOB	2
		(ATTACHING PARTS)	
-17	306(1/4)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/4 in. lg	4
		- - - * - - -	
-18	20399	. KNOB	1
		(ATTACHING PARTS)	
-19	304(3/16)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 3/16 in. lg	1
		- - - * - - -	
-20	20374	. PANEL, Printed.	1
		(ATTACHING PARTS)	
-21	113(3/8)	. SCREW, Machine, bind hd, brs, blk oxidized, 3-48 thd by 3/8 in. lg	2
-22	10353	. WASHER, Spring tension	2
		- - - * - - -	
-23	—	. RETAINER, Lamp housing (p/o 8, Figure 7)(GMC)(A-4996)	2
		(ATTACHING PARTS)	
-24	—	. NUT, Hexagon, 15/32—32 thd (supplied with 8, Figure 7).	2
-25	—	. WASHER, Lock (supplied with 8, Figure 7)	2
		- - - * - - -	
-26	8862	. RESISTOR, Variable, comp, 0 to 250,000 ohms, with SPST switch (AB)(JS-DB2541FS2032)	1
		(ATTACHING PARTS)	
-27	4697	. NUT, Round.	1
-28	8540	. WASHER, Lock, ph brz, ni pl, 0.384 ID by 0.500 OD by 0.022 in. thk (SH)(1920-02)	1
		- - - * - - -	
-29	20332	. SWITCH, Rotary.	1
		(ATTACHING PARTS)	
-30	—	. NUT, Hexagon, brs, ni pl, 1/4—32 thd by 0.062 in. thk (supplied with 29, Figure 7)	1
		- - - * - - -	
-31	20380	. SWITCH ASSEMBLY	1
-32	16541	. INSULATOR, Plate	1
		(ATTACHING PARTS)	
-33	143(5/16)	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 5/16 in. lg	4
		- - - * - - -	
-34	20372	. PANEL ASSEMBLY	1



TP1615

Figure 7. ARC Type C-67A Control Unit Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
7-	20350	CONTROL UNIT ASSEMBLY, ARC Type C-67A	1
-1	20375	. COVER ASSEMBLY	1
-2	20343	. PLATE ASSEMBLY, Mounting	1
		(ATTACHING PARTS)	
-3	503(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-4	12357	. CONNECTOR, Receptacle, electrical	1
		(ATTACHING PARTS)	
-5	5310	. NUT, Knurled (supplied with 4, Figure 7)	1
		- - - * - - -	
-6	20349	. PLATE, Identification	1
		(ATTACHING PARTS)	
-7	8081	. SCREW, Tapping, thread forming, rh, Phillips dr, stl, blk parkerized, No. 2 by 5/32 in. lg (PK)(Z)	2
		- - - * - - -	
-8	16293	. LIGHT ASSEMBLY, Panel (GMC)(A-5890)	2
-9	—	. . LAMP HOUSING ASSEMBLY (GMC)(A-5181)	2
-10	—	. . . GROMMET, Panel light (GMC)(A-4846A)	2
-11	—	. . . SPRING, Lamp retainer (GMC)(A-3674).	2
-12	—	. . . LAMP HOUSING AND FILTER ASSEMBLY (GMC)(A-5178) . .	2
-13	8622	. LAMP, Incandescent, 28V, T-1-3/4 bulb (GE)(327)	2
-13	21760	. LAMP KIT, c/o two lamps (GE)(330)(for 14V model).	1
-14	16331	. KNOB	1
		(ATTACHING PARTS)	
-15	306(3/16)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	
-16	20403	. KNOB	2
		(ATTACHING PARTS)	
-17	306(1/4)	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/4 in. lg	4
		- - - * - - -	
-18	20399	. KNOB	1
		(ATTACHING PARTS)	
-19	304(3/16)	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 3/16 in. lg	1
		- - - * - - -	
-20	20374	. PANEL, Printed.	1
		(ATTACHING PARTS)	
-21	113(3/8)	. SCREW, Machine, bind hd, brs, blk oxidized, 3-48 thd by 3/8 in. lg	2
-22	10353	. WASHER, Spring tension	2
		- - - * - - -	
-23	—	. RETAINER, Lamp housing (p/o 8, Figure 7)(GMC)(A-4996)	2
		(ATTACHING PARTS)	
-24	—	. NUT, Hexagon, 15/32—32 thd (supplied with 8, Figure 7).	2
-25	—	. WASHER, Lock (supplied with 8, Figure 7)	2
		- - - * - - -	
-26	8862	. RESISTOR, Variable, comp, 0 to 250,000 ohms, with SPST switch (AB)(JS-DB2541FS2032)	1
		(ATTACHING PARTS)	
-27	4697	. NUT, Round.	1
-28	8540	. WASHER, Lock, ph brz, ni pl, 0.384 ID by 0.500 OD by 0.022 in. thk (SH)(1920-02)	1
		- - - * - - -	
-29	20332	. SWITCH, Rotary.	1
		(ATTACHING PARTS)	
-30	—	. NUT, Hexagon, brs, ni pl, 1/4—32 thd by 0.062 in. thk (supplied with 29, Figure 7)	1
		- - - * - - -	
-31	20380	. SWITCH ASSEMBLY	1
-32	16541	. INSULATOR, Plate	1
		(ATTACHING PARTS)	
-33	143(5/16)	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 5/16 in. lg	4
		- - - * - - -	
-34	20372	. PANEL ASSEMBLY	1



TP1322

Figure 8. ARC Type P-15A Power Unit Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
8-	20650(14V)	POWER UNIT ASSEMBLY, ARC Type P-15A (14V)	1
8-	20650(28V)	POWER UNIT ASSEMBLY, ARC Type P-15A (28V)	1
-1	21308	. COVER	1
		(ATTACHING PARTS)	
	513(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, blk oxidized, 3-48 thd by 1/4 in. lg (SH)(SEMS)	8
		- - - * - - -	
-2	8777	. CAPACITOR, Fixed, electrolytic, 12 μf ±20 per cent, 150 vdcw . .	2
-3	20744	. REACTOR, 3.3 H, 70 ma	2
		(ATTACHING PARTS)	
	504(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1/4 in. lg	2
	104(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1/4 in. lg . . .	2
	7710	. TERMINAL, Lug	2
		- - - * - - -	
-4	8747	. CAPACITOR, Fixed, paper, 0.047 μf ±5 per cent, 200 vdcw . . . (CLD)(TWMA2S47-1)	1
-5	20884	. PLATE, Terminal	1
		(ATTACHING PARTS)	
	5219	. STUD, Threaded	2
		- - - * - - -	
-6	206(7K)	. RESISTOR, Fixed, WW, 7000 ohms ±5 per cent, 10w.	1
-7	8897	. CAPACITOR, Fixed, paper, 3 μf ±20 per cent, 400 vdcw (SPR) . . (116P30504S15)	2
		(ATTACHING PARTS)	
	—	. NUT, Hexagon (supplied with 7, Figure 2)(SPR)(6-113)	2
	—	. WASHER, Lock (supplied with 7, Figure 2)	2
		- - - * - - -	
-8	12348	. CONNECTOR, Receptacle, electrical.	1
		(ATTACHING PARTS)	
	5131	. NUT, Knurled (supplied with 8, Figure 2)	1
		- - - * - - -	
-9	8627(.022)	. CAPACITOR, Fixed, ceramic, 22,000 μμf +100 -0 per cent, . . . 500 vdcw (AB)(40-223W)	1
-10	12428	. CONNECTOR, Receptacle, electrical.	1
		(ATTACHING PARTS)	
	9327	. NUT, Knurled (supplied with 10, Figure 2)	1
		- - - * - - -	
-11	20917	. RELAY, Armature (PCR)(4CQA19C2).	1
		(ATTACHING PARTS)	
	504(5/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 5/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-12	20894	. FILTER, 5 amp, 50V (SPR)(5JX27)	1
		(ATTACHING PARTS)	
	—	. NUT, Hexagon, 1/2-28 thd by 1/8 in. thk (supplied with 12, . . . Figure 2)	1
	—	. WASHER, Lock (supplied with 12, Figure 2)	1
		- - - * - - -	
-13	20676	. DYNAMOTOR ASSEMBLY (14V)(see Figure 9)	1
-13	20677	. DYNAMOTOR ASSEMBLY (28V)(see Figure 9)	1
		(ATTACHING PARTS)	
	509(5/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 10-32 thd by 5/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-14	20888	. BASE SUBASSEMBLY.	1
		(ATTACHING PARTS)	
	8051	. SCREW, Machine, fh, stl, cad pl, 3-48 thd by 0.197 in. lg	12
		- - - * - - -	
-15	20915	. ABSORBER, Shock	4
-16	21266	. STRAP	4

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
	607(7/16)	. SCREW, Machine, fil hd, sst, 6-32 thd by 7/16 in. lg	4
	21620	. WASHER, Shouldered.	4
	5108	. WASHER, Flat, ph brz, ni pl, 0.166 ID by 0.437 OD by 0.062 in. thk	4
		- - - * - - -	
8-17	20979	. PLATE, Identification	1
		(ATTACHING PARTS)	
	8081	. SCREW, Tapping, thread forming, rd hd, Phillips dr, stl, blk parkerized, No. 2 by 5/32 in. lg (PK)(Type Z)	2
		- - - * - - -	
-18	20882	. FRAME ASSEMBLY	1

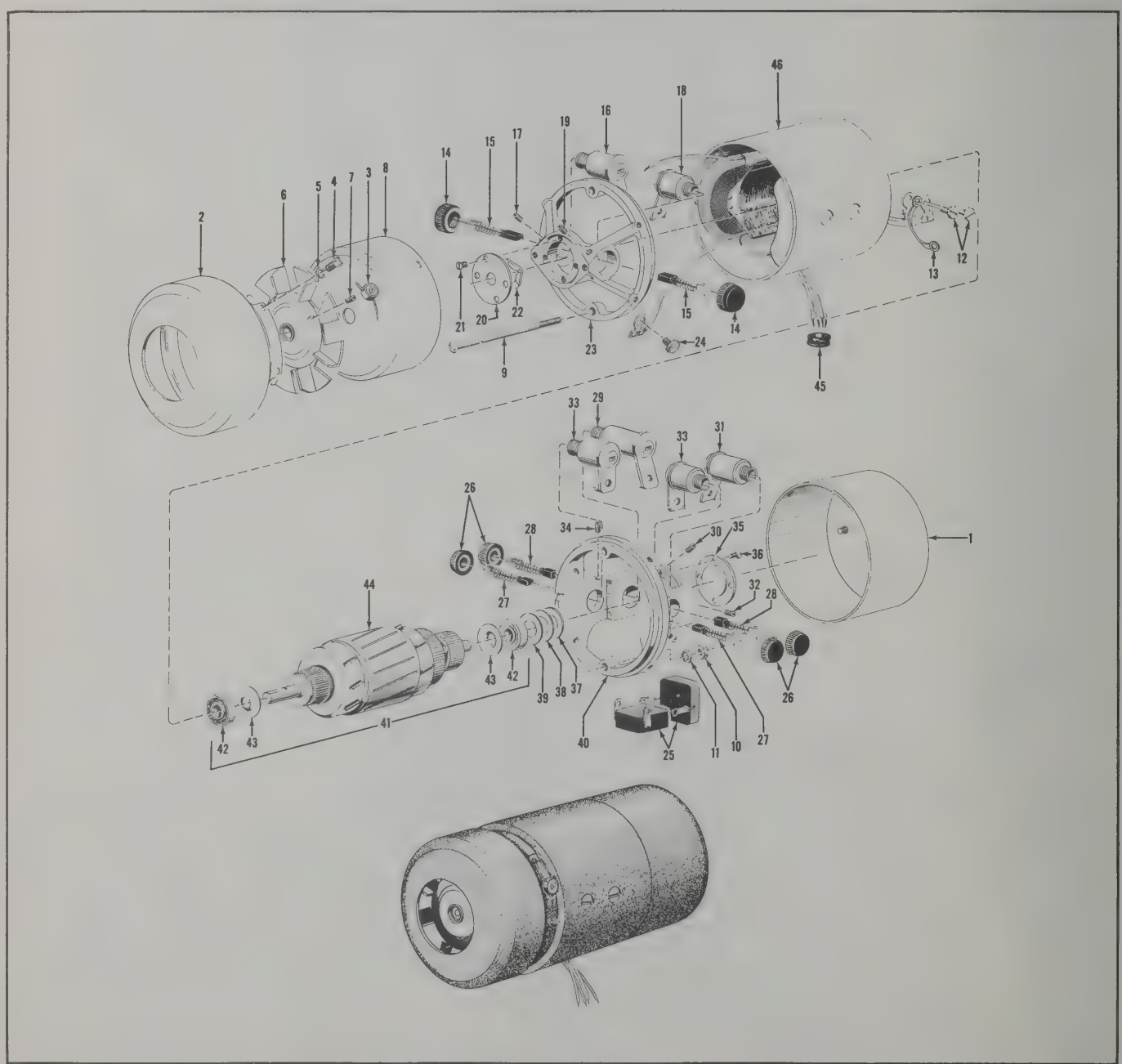


Figure 9. Dynamotor Assembly

TP1617

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
9-	20676	DYNAMOTOR ASSEMBLY (14V)(see 13, Figure 8)	Ref
9-	20677	DYNAMOTOR ASSEMBLY (28V)(see 13, Figure 8)	Ref
-1	8940(0001)	. COVER ASSEMBLY (CE)(52899)	1
-2	8940(0002)	. COVER (CE)(49490).	1
		(ATTACHING PARTS)	
-3	18701	. SEAL	1
-4	166(5/16)	. SCREW, Machine, fil hd, brs, ni pl, 6-32 thd by 5/16 in. lg	4
-5	8544	. WASHER, Lock, split, No. 6	4
		- - - * - - -	
-6	8940(0003)	. FAN, Armature assembly (CE)(52897)	1
		(ATTACHING PARTS)	
-7	306(1/8)	. SETSCREW, Splined dr, cup point, sst, 6-32 thd by 1/8 in. lg	1
		- - - * - - -	
-8	8940(0004)	. COVER, Enclosing (CE)(49439)	1
	8940(0005)	. BEARING BRACKET ASSEMBLY (14V)(CE)(SA-55702)	1
	8940(0006)	. BEARING BRACKET ASSEMBLY (28V)(CE)(SA-54173)	1
		(ATTACHING PARTS)	
-9	8940(0007)	. BOLT, Tie, 6-32 thd by 3-1/2 in. lg (CE)(50193)	2
-10	—	. NUT, Hexagon, brs, ni pl, 6-32 thd	2
-11	—	. WASHER, Lock (SH)(1906-1)	2
		- - - * - - -	
-12	506(3/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 6-32 thd by 3/16 in. lg (SH)(SEMS)	2
-13	8940(0008)	. . GROUNDING LINK (CE)(C-32562-2)	1
-14	8940(0009)	. . CAP, Brush (CE)(C-32311-1)	2
-15	8940(0010)	. . BRUSH ASSEMBLY (14V)(CE)(C-33562-26-L12).	2
-15	8940(0011)	. . BRUSH ASSEMBLY (28V)(CE)(C-33562-26-L9)	2
-16	8940(0012)	. . BRUSH HOLDER, Metallic (CE)(C-54110-2)	1
		(ATTACHING PARTS)	
-17	—	. . SETSCREW, Internal hex dr, stl, zinc pl, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	
-18	8940(0013)	. . BRUSH HOLDER, Nonmetallic (CE)(C-36493-2).	1
		(ATTACHING PARTS)	
-19	—	. . SETSCREW, Internal hex dr, stl, zinc pl, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	
-20	8940(0014)	. . COVER PLATE, Bearing (CE)(C-38489-2)	1
		(ATTACHING PARTS)	
-21	142(3/16)	. . SCREW, Machine, fh, brs, ni pl, 2-56 thd by 3/16 in. lg	4
		- - - * - - -	
-22	8940(0015)	. . WASHER, Spring tension (CE)(52769)	1
-23	8940(0016)	. . BEARING BRACKET (CE)(B-52898-2)	1
	8940(0017)	. BEARING BRACKET ASSEMBLY (CE)(SA-54174)	1
		(ATTACHING PARTS)	
-24	506(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 6-32 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-25	8618(10000)	. . CAPACITOR, Fixed, mica, 10,000 $\mu\mu$f ±2 per cent, 500 vdcw. (EMM)(VTCM-35-10000)	2
-26	8940(0018)	. . CAP, Brush (CE)(52837).	4
-27	8940(0019)	. . BRUSH ASSEMBLY (CE)(33562-42-H3)	2
-28	8940(0020)	. . BRUSH ASSEMBLY (CE)(33562-23-H3)	2
-29	8940(0021)	. . BRUSH HOLDER, Nonmetallic (CE)(39936-2)	1
		(ATTACHING PARTS)	
-30	—	. . SETSCREW, Internal hex dr, stl, zinc pl, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	
-31	8940(0022)	. . BRUSH HOLDER, Metallic (CE)(54108-2)	1
		(ATTACHING PARTS)	
-32	—	. . SETSCREW, Internal hex dr, stl, zinc pl, 6-32 thd by 3/16 in. lg	2
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
9-33	8940(0023)	. . BRUSH HOLDER, Nonmetallic (CE)(39936-1)	2
		(ATTACHING PARTS)	
-34	—	. . SETSCREW, Internal hex dr, stl, zinc pl, 6-32 thd by 3/16 in. lg	4
		- - - * - - -	
-35	8940(0024)	. . COVER PLATE, Bearing (CE)(C-38489-1).	1
		(ATTACHING PARTS)	
-36	142(3/16)	. . SCREW, Machine, fh, brs, ni pl, 2-56 thd by 3/16 in. lg	4
		- - - * - - -	
-37	8940(0025)	. . WASHER, Flat, brs, 0.406 ID by 0.620 OD by 0.010 in. thk . .	AR
		(CE)(33568-1)	
-38	8940(0026)	. . WASHER, Flat, stl, 0.406 ID by 0.620 OD by 0.005 in. thk . . .	AR
		(CE)(33568-2)	
-39	8940(0027)	. . WASHER, Flat, ph brz, 0.406 ID by 0.620 OD by 0.003 in. thk .	AR
		(CE)(33568-3)	
-40	8940(0028)	. . BEARING BRACKET (CE)(B-42833-X-1)	1
-41	8940(0029)	. ARMATURE ASSEMBLY (14V)(CE)(55637)	1
-41	8940(0030)	. ARMATURE ASSEMBLY (28V)(CE)(54100)	1
-42	—	. . BEARING, Ball (ND)(7R4-XR1225CF)	2
-43	8940(0031)	. . GREASE SLINGER (CE)(38488)	2
-44	8940(0032)	. . ARMATURE (14V)(CE)(55637-W.S.12717)	1
-44	8940(0033)	. . ARMATURE (28V)(CE)(54100-W.S.12716)	1
-45	8940(0034)	. GROMMET, Rubber (CE)(52814)	1
-46	8940(0035)	. FRAME ASSEMBLY (14V)(CE)(SA-55638)	1
-46	8940(0036)	. FRAME ASSEMBLY (28V)(CE)(SA-54172)	1

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20812	6-93	1
20814	6-62	1
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504(5/32)	8-11	2
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700(132)	4-82	5
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700(136)	3-114	5
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8081	6-63	6
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8497	3-210	3
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8554	4-72	1
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8683	6-88	1
8747	8-4	1
8756	6-33	1
8765(24)	3-120	4
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8765(7.0)	4-129	1
8775(5/16)	4-64	1
8777	4-254	3
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8780	6-54	2
8791(20)	3-117	5
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8791(4)	3-148	2
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8797(300)	3-200	1
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8848	4-75	2
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8879(0.82)	4-77	1
8890(0.022)	4-255	1
8897	8-7	2
8908(2200)	4-246	1
8940(0001)	9-1	1
8940(0002)	9-2	1
8940(0003)	9-6	1
8940(0004)	9-8	1
8940(0005)	(9-)	1
8940(0006)	(9-)	1
8940(0007)	9-9	2
8940(0008)	9-13	1
8940(0009)	9-14	2
8940(0010)	9-15	2
8940(0011)	9-15	2
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8940(0013)	9-18	1
8940(0014)	9-20	1
8940(0015)	9-22	1
8940(0016)	9-23	1
8940(0017)	(9-)	1
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R322	4-208	201(100K)
R323	4-207	201(470)
R324	4-208	201(100K)
R325	2-209	201(15K)
R326	4-210	201(680)
R327	4-208	201(100K)
R328	4-209	201(15K)
R329	4-237	201(150K)
R329	4-237	201(330K)
R330	4-240	201(82K)
R330	4-240	201(27K)
R331	4-230	201(1MEG)
R332	4-230	201(1MEG)
R333	4-238	201(22K)
R334	4-248	201(2.2MEG)
R335	4-249	201(470K)
R336	4-249	201(470K)
R337	4-242	201(82K)

Reference Designation	Figure & Index No.	Part No.
R338	4-123	204(10)
R339	4-125	201(3300)
R340	4-116	201(1500)
R341	4-122	200(33K)
R342	4-120	200(220)
R343	4-120	200(220)
R344	4-224	202(270)
R345	4-225	201(470K)
R346	4-226	200(1MEG)
R347	4-244	201(1MEG)
R348	4-228	201(680K)
R349	4-229	201(2MEG)
R350	4-232	201(1.5MEG)
R351	4-222	200(1.5MEG)
R352	4-227	201(47K)
R353	4-233	201(10K)
R354	4-225	201(470K)
R355	4-239	201(100K)
R356	4-232	201(1.5MEG)
R358	4-230	201(1MEG)
R359	4-230	201(1MEG)
R360	4-244	201(1MEG)
R361	4-225	201(470K)
R362	4-234	201(470)
R401	5-11	201(27K)
R402	5-12	201(100K)
R403	5-12	201(100K)
R404	5-28	201(220K)
R405	5-14	201(47K)
R406	5-31	201(100K)
R407	5-26	201(2200)
R408	5-30	201(47K)
R409	5-16	201(2200)
R410	5-29	201(100K)
R411	5-15	201(1MEG)
R412	5-19	8826
R413	5-18	201(47K)
R414	5-25	201(1600)
R415	5-18	201(47K)
R416	5-24	201(100K)
R417	5-17	201(1K)
R418	5-19	8826
R601	7-26	8862
R701	8-6	206(7K)
S601	7-29	20332
S602	7-31	20380
S603	7-26	8862
T201	6-13	19345
T301	4-98	19968
T302	4-215	19968
T303	4-215	19968
T304	4-212	21248
T305	4-259	20679
TY201	6-88	8683
V101	3-114	700(136)
V102	3-140	700(136)
V103	3-139	700(122)
V104	3-163	700(129)
V105	3-23	700(121)
V106	3-4	700(143)

Reference Designation	Figure & Index No.	Part No.
V301	4-162	700(122)
V302	4-162	700(122)
V303	4-143	700(132)
V304	4-82	700(132)
V305	4-214	700(132)
V306	4-214	700(132)
V307	4-214	700(132)
V308	4-260	700(131)
V309	4-126	700(136)
V310	4-256	700(133)
V311	4-261	700(139)
V401	5-1	700(143)
V402	5-2	700(104)
V403	5-7	700(136)
V404	5-9	700(136)
W201	6-92	20811
W202	6-93	20812
W301	4-173	20301
XDS601	7-8	16293
XDS602	7-8	16293
XV105	3-24	15230
XV106	(3-)	19611
XV402	5-32	20362
Y101	3-76	19658(54.00)
Y102	3-76	19658(54.50)
Y103	3-76	19658(55.00)
Y104	3-76	19658(55.50)
Y105	3-76	19658(56.00)
Y106	3-76	19658(56.50)
Y107	3-76	19658(57.00)
Y108	3-76	19658(57.50)
Y109	3-76	19658(58.00)
Y110	3-76	19658(58.50)
Y111	3-76	19658(59.00)
Y112	3-76	19658(59.50)
Y113	3-76	19658(60.00)
Y114	3-76	19658(60.50)
Y115	3-76	19658(61.00)
Y116	3-76	19658(61.50)
Y117	3-76	19658(62.00)
Y118	3-76	19658(62.50)
Y119	3-75	19657(10.00)
Y120	3-75	19657(10.10)
Y121	3-75	19657(10.20)
Y122	3-75	19657(10.30)
Y123	3-75	19657(10.40)
Y124	3-75	19657(10.50)
Y125	3-75	19657(10.60)
Y126	3-75	19657(10.70)
Y127	3-75	19657(10.80)
Y128	3-75	19657(10.90)
Y129	3-75	19657(10.95)
Y130	3-75	19657(10.85)
Y131	3-75	19657(10.75)
Y132	3-75	19657(10.65)
Y133	3-75	19657(10.55)
Y134	3-75	19657(10.45)
Y135	3-75	19657(10.35)
Y136	3-75	19657(10.25)
Y137	3-75	19657(10.15)

Reference Designation	Figure & Index No.	Part No.
Y138	3-75	19657(10.05)
Y301	4-45	19658(53.15)
Y302	4-45	19658(53.65)
Y303	4-45	19658(54.15)
Y304	4-45	19658(54.65)
Y305	4-45	19658(55.15)
Y306	4-45	19658(55.65)
Y307	4-45	19658(56.15)
Y308	4-45	19658(56.65)
Y309	4-45	19658(57.15)
Y310	4-45	19658(57.65)
Y311	4-45	19658(58.15)
Y312	4-45	19658(58.65)
Y313	4-45	19658(59.15)
Y314	4-45	19658(59.65)
Y315	4-45	19658(60.15)
Y316	4-45	19658(60.65)
Y317	4-45	19658(61.15)
Y318	4-45	19658(61.65)
Z101	3-1	20806
Z701	8-12	20894

Dependable Airborne Electronic Equipment Since 1928

ARCPC-210-1
June 1959

7010077
Printed in U.S.A.

Parts Catalog

ARC TYPE 210 VHF COMMUNICATION EQUIPMENT

Aircraft Radio Corporation
Boonton, New Jersey

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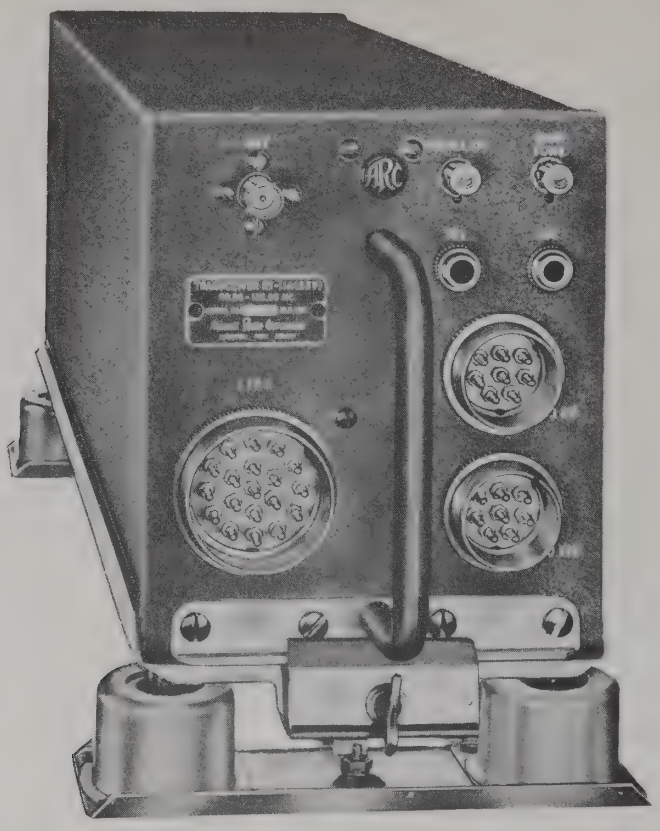
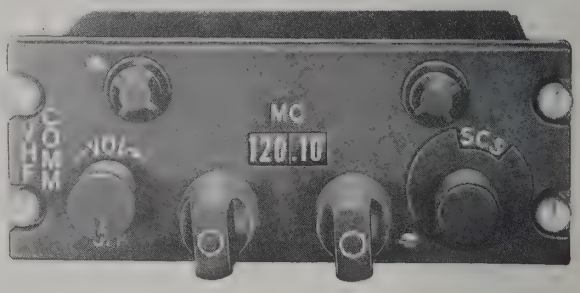
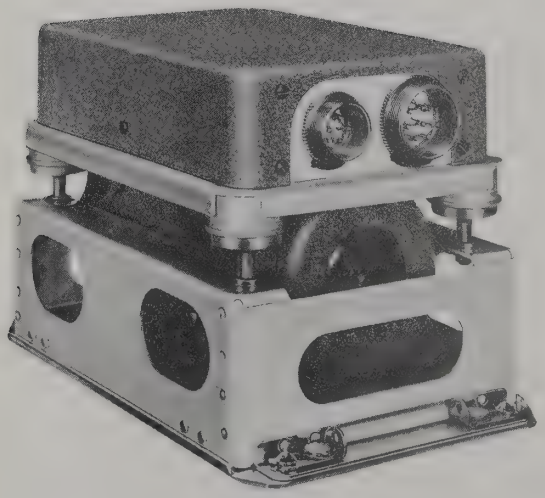


ARC TYPE RT-11A RECEIVER-TRANSMITTER
WITH
ARC TYPE M-31A MOUNTING



ARC TYPE C-67A CONTROL UNIT



ARC TYPE P-15A POWER UNIT
WITH
ARC TYPE M-32A MOUNTING

TP1112

Figure 1. ARC Type 210 VHF Communication Equipment, Major Units

SECTION I

GENERAL INFORMATION

1-1. INTRODUCTION.

This book contains parts information for the ARC Type 210 VHF Communication Equipment (Figure 1) manufactured by Aircraft Radio Corporation, Boonton, New Jersey.

1-2. PARTS LIST.

The Parts List, Section II, consists of a breakdown of the equipment into assemblies, subassemblies, and detail parts. Items which are made from bulk stock, such as cut lengths of wire, are not included.

The description column lists each assembly, or subassembly, and its detail parts properly indented to show their relationship to the assembly or subassembly. Attaching parts are listed in the same indented column, following the parts they attach. The symbol "- - - * - - -" indicates the completion of the attaching parts. A reference to a figure and index number in the description column refers to a separate illustration and listing in which the detail parts are shown, or to the illustration on which the part is shown as an assembled item. Parts which are limited in use to a specific model or serial number group are identified by noting the applicable model or serial numbers. Codes and part numbers of manufacturers (paragraph 1-5) other than ARC are also included in parentheses in the description column.

Except for attaching parts, the quantities listed in the units-per-assembly column are the quantities per assembly, per subassembly, etc. The quantities specified, therefore, are not necessarily the total for the equipment; total quantities are listed in the Numerical Index, Section III. The letters "AR" denote that the quantity used is "as required." "Ref" indicates an assembly which was removed previously and which is relisted for reference purposes.

1-3. NUMERICAL INDEX.

The part number column of the Numerical Index, Section III, lists all part numbers included in the Parts List, cross-referenced to the figure and index numbers. Parts which have neither an ARC nor a manufacturer's part number are listed alphabetically by item name at the beginning of the column. Where the part number refers to an assembly or subassembly which is not shown assembled on the illustration, no index number is assigned, and therefore only the figure number, on which the detail parts are shown, is listed in parentheses.

The numerical index is compiled in accordance with the following alphabetical-numerical system. Part number arrangement starts at the left and continues from left to right, one column at a time, until part number position in the numerical index is determined. Beginning with the first column, the order of precedence to determine the part number position is as follows:

1. Letters A through Z
2. Numerals 0 through 9

Continuing with the second and succeeding column, the order of precedence to determine the part number is as follows:

1. Space (blank column)
2. Diagonal (slant) /
3. Point (period) .
4. Dash (—)
5. Parentheses ( )
6. Letters A through Z
7. Numerals 0 through 9

Alphabetical O's are considered as numerical zeros.

The total quantity column lists the total quantity of assemblies or parts for the equipment. The letters "AR" indicate that the quantities used are indeterminate (as required) and no definite quantity can be shown.

1-4. REFERENCE DESIGNATION INDEX.

The Reference Designation Index, Section IV, lists the reference designations which have been assigned to the parts of the equipment, cross-referenced to the figure and index numbers and the part number. Where no figure and index number exists for a part, the figure and index number of the next higher assembly is listed in parentheses. The reference designation column lists the reference designations in alphabetical-numerical sequence. All reference designations used in illustrations and publications pertaining to the equipment are listed.

1-5. MANUFACTURERS' CODES.

The following is a list of manufacturers' codes, and the corresponding names and addresses, which are referenced in this Parts Catalog.

Code	Name and Address
AB	Allen-Bradley Co. Milwaukee, Wisconsin
AEV	Aerovox Corp. New Bedford, Massachusetts
AMP	Amphenol Electronics Corp. Chicago 50, Illinois
CE	Continental Electric Co. Newark, New Jersey
CIN	Cinch Manufacturing Corp. Chicago, Illinois
CLD	Cornell-Dubilier Electric Corp. South Plainfield, New Jersey
CLP	Clifton Precision Products Co., Inc. Clifton Heights, Pennsylvania
CMPB	Colin Campbell Co., Inc. Danbury, Connecticut
CN	Centralab Div. Glove Union, Inc. Milwaukee, Wisconsin
DABU	Dale Products, Inc. Columbus, Nebraska
DECN	Delevan Electronics Corp. East Aurora, New York
EBY	Hugh H. Eby, Inc. Philadelphia, Pennsylvania
EMM	Electro Motive Mfg. Co. Willimantic, Connecticut
ERC	Erie Resistor Corp. Erie, Pennsylvania
ESNA	Elastic Stop Nut Corp. of America Union, New Jersey
FML	Fansteel Metallurgical Corp. North Chicago, Illinois
GBR	Globar Div. Carborundum Co. Niagara Falls, New York
GOS	Goshen Rubber Co., Inc. Goshen, Indiana
GVP	Groov-Pin Corp. Ridgefield, New Jersey
HUG	Hughes Aircraft Co. Culver City, California
IPC	Industrial Products Co., Div. Knudsen, Inc. Danbury, Connecticut
JFDM	J. F. D. Electronics Corp. Brooklyn, New York
JFE	Jeffers Electronics Corp. Dubois, Pennsylvania
KER	Kearfott Mfg. Corp. Newark, New Jersey
KO	Kollsman Instrument Corp. Elmhurst, New York
LCL	L. L. Constantin & Co. Lodi, New Jersey
MCS	Micro Switch Div. Minneapolis-Honeywell Regulator Co. Freeport, Illinois
MICRODOT	Microdot, Inc. South Pasadena, California
ND	New Departure Div. General Motors Corp. Bristol, Connecticut
NHBB	New Hampshire Ball Bearing, Inc. Peterborough, New Hampshire
PK	Parker-Kalon Corp. New York, New York
RESP	Resistance Products Co. Harrisburg, Pennsylvania
SH	Shakeproof, Inc. Div. Illinois Tool Works Chicago, Illinois
SLM	Solar Manufacturing Corp. New York, New York
SPR	Sprague Electric Co. North Adams, Massachusetts
STL	Stackpole Carbon Co. St. Mary's, Pennsylvania
TI	Texas Instruments, Inc. Components Div. Dallas, Texas
VEL	The Vellumoid Co. Worcester, Massachusetts
WKI	Waldes-Koh-I-Noor, Inc. Long Island City, New York
WS	Weston Electrical Instrument Corp. Newark, New Jersey

SECTION II

PARTS LIST

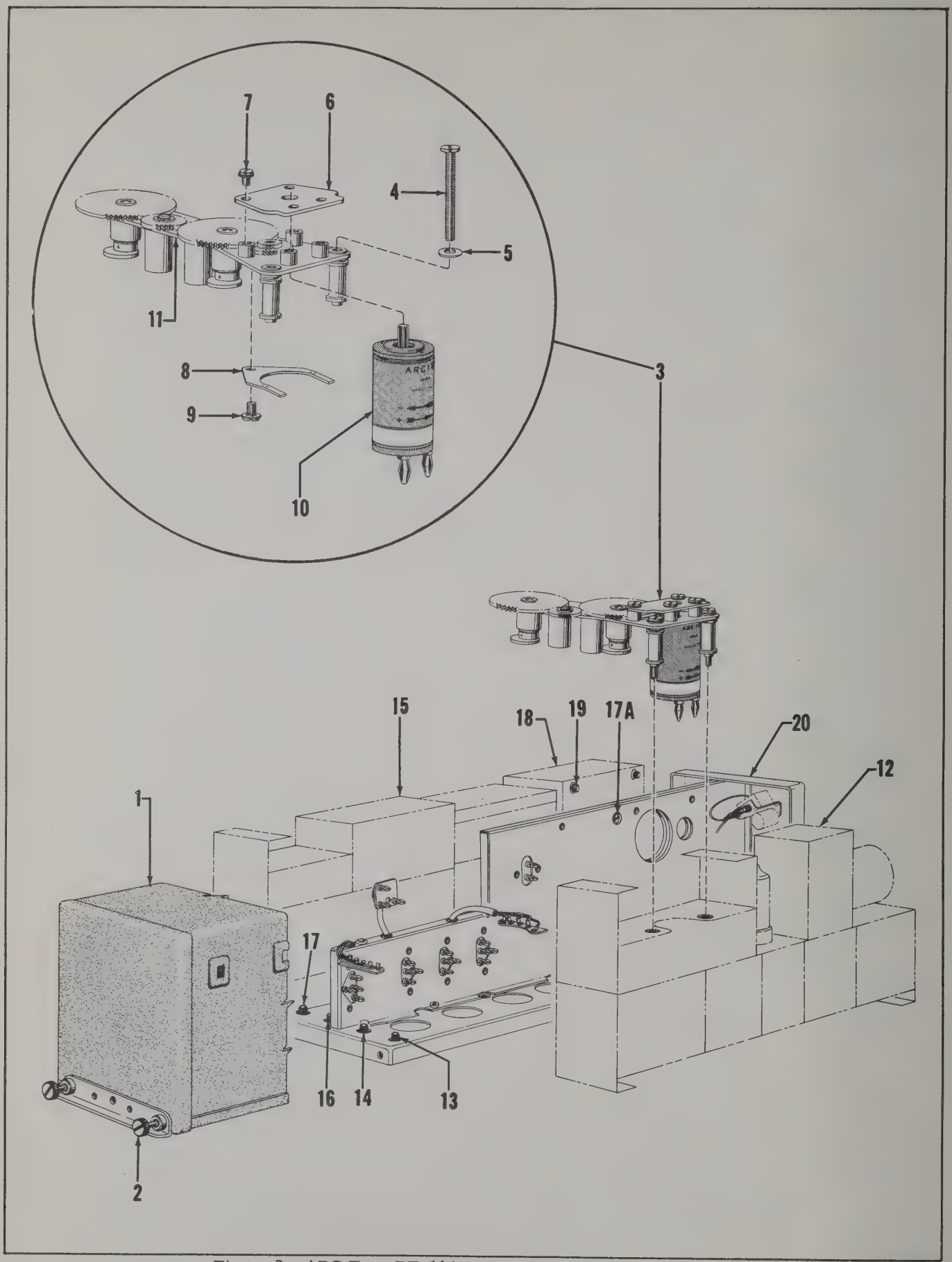


Figure 2. ARC Type RT-11A Receiver-Transmitter Assembly TP1601

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
2-	19300(14V)	RECEIVER-TRANSMITTER ASSEMBLY, ARC Type RT-11A (14V). .	1
2-	19300(28V)	RECEIVER-TRANSMITTER ASSEMBLY, ARC Type RT-11A (28V). .	1
-1	19480	. CABINET ASSEMBLY	1
		(ATTACHING PARTS)	
-2	13996	. SCREW, Externally relieved body, No. 10-32 thd	2
		- - - * - - -	
-3	19544(14V)	. GEARING SUBASSEMBLY (14V)	1
-3	19544(28V)	. GEARING SUBASSEMBLY (28V)	1
		(ATTACHING PARTS)	
-4	104(1-1/8)	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 1-1/8 in. lg. .	2
-5	7730	. WASHER, Spring tension	2
		- - - * - - -	
-6	19543	. . PLATE	1
		(ATTACHING PARTS)	
-7	502(3/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 2-56 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-8	19542	. . SPRING	1
		(ATTACHING PARTS)	
-9	503(5/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	1
		- - - * - - -	
-10	18800	. . MOTOR, DC, 14V (CLP)(DC-8-C-51)	1
-10	18801	. . MOTOR, DC, 28V (CLP)(DC-8-C-11)	1
-11	—	. . GEAR ASSEMBLY, c/o gear 19498, gear 19540, gear 19537, . and plate 19493	1
-12	19370(14V)	. TRANSMITTER ASSEMBLY (14V)(see Figure 3).	1
-12	19370(28V)	. TRANSMITTER ASSEMBLY (28V)(see Figure 3).	1
		(ATTACHING PARTS)	
-13	106(7/32)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 7/32 in. lg . .	1
-14	106(9/32)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 9/32 in. lg . .	4
		- - - * - - -	
-15	20420(14V)	. RECEIVER ASSEMBLY (14V)(see Figure 4).	1
-15	20420(28V)	. RECEIVER ASSEMBLY (28V)(see Figure 4).	1
		(ATTACHING PARTS)	
-16	106(7/32)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 7/32 in. lg . .	1
-17	106(9/32)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 9/32 in. lg . .	3
-17A	106(5/16)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 5/16 in. lg . .	1
		- - - * - - -	
-18	20360	. MODULATOR ASSEMBLY (see Figure 5)	1
		(ATTACHING PARTS)	
-19	106(9/32)	. SCREW, Machine, bind hd, brs, ni pl, 6-32 thd by 9/32 in. lg . .	2
		- - - * - - -	
-20	19302(14V)	. CHASSIS ASSEMBLY (14V)(see Figure 6)	1
-20	19302(28V)	. CHASSIS ASSEMBLY (28V)(see Figure 6)	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-	19370(14V)	TRANSMITTER ASSEMBLY (14V)(see 12, Figure 2)	Ref
3-	19370(28V)	TRANSMITTER ASSEMBLY (28V)(see 12, Figure 2)	Ref
-1	20806	. FILTER ASSEMBLY	1
		(ATTACHING PARTS)	
-2	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lock- . . . . washer, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-3	19323	. . JACK, Tip (Microdot)(3223)	1
-4	700-143	. ELECTRON TUBE, Type 6850	1
-5	19628	. SPRING, Leaf	1
		(ATTACHING PARTS)	
-6	8040	. NUT, Hexagon, brs, ni pl, 4-40 thd by 0.062 in. thk	1
		- - - * - - -	
-7	19653	. PLATE, Cover	1
		(ATTACHING PARTS)	
-8	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lock- . . . . washer, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
	19611	. SOCKET ASSEMBLY	1
		(ATTACHING PARTS)	
-9	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-10	203(150)	. . RESISTOR, Fixed, comp, 150 ohms ±5 per cent, 2w (AB)(HB1515)	1
-11	8877(1.0)	. . CHOKE, 1.0 μh ±20 per cent (JFE)(10100-630)	1
-12	202(12K)	. . RESISTOR, Fixed, comp, 12,000 ohms ±5 per cent, 1w (AB) . . .	1
		(GB1235)	
-13	8796(120)	. . CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw . .	5
-14	201(22K)	. . RESISTOR, Fixed, comp, 22,000 ohms ±5 per cent, 1/2w (AB) . .	2
		(EB2235)	
-15	14141(3)	. . CHOKE, 3 μh ±10 per cent (JFE)(10100-652)	2
-16	201(1K)	. . RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 1/2w (AB) . . .	1
		(EB1025)	
-17	19655	. BRACKET ASSEMBLY	1
		(ATTACHING PARTS)	
-18	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-19	10284	. TERMINAL ASSEMBLY	1
		(ATTACHING PARTS)	
-20	103(1/4)	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg	1
-21	17166	. TERMINAL, Lug	1
-22	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH)(1703)	2
		- - - * - - -	
-23	700-121	. ELECTRON TUBE, Type 5686	1
-24	15230	. SOCKET, Electron tube (CIN)(53F13381)	1
		(ATTACHING PARTS)	
-25	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . . ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
-26	4103	. WASHER, Lock, sst, No. 3, 0.105 ID by 0.220 OD by 0.016 in. . . . thk (SH)(1703)	2
-27	10283	. INSERT, Screw thread	2
		- - - * - - -	
-28	201(220)	. RESISTOR, Fixed, comp, 220 ohms ±5 per cent, 1/2w (AB)(EB2215).	1
	19660(14V)	. TUNER ASSEMBLY, 14V	1
	19660(28V)	. TUNER ASSEMBLY, 28V	1
		(ATTACHING PARTS)	
-29	504(1-5/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, . . ni pl, 4-40 thd by 1-5/16 in. lg (SH)(SEMS)	4
-30	19647	. POST, Threaded	1
-31	7730	. WASHER, Spring tension	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-32	20733	. . CONTACT SHIELD.	2
		(ATTACHING PARTS)	
-33	503(5/32)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	4
		- - - * - - -	
-34	19664	. . RELAY, Armature (14V)	2
-34	19665	. . RELAY, Armature (28V)	2
		(ATTACHING PARTS)	
-35	503(5/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-35A	17633	. . SEMICONDUCTOR DEVICE, Diode, type 1N462 (used beginning. . with M-6 units)	2
		- - - * - - -	
-36	314(1/4)	. . SETSCREW, Fluted socket dr, cone point, sst, 4-40 thd by 1/4. . in. lg	8
-37	19571	. . PAWL (Right hand).	1
-38	19568	. . PAWL (Left hand)	1
		(ATTACHING PARTS)	
-39	17742	. . RING, Retaining (WKI)(5100-18-C)	2
-40	17765	. . WASHER, Flat	AR
		- - - * - - -	
-41	19566	. . SPRING, Helical, torsion	2
-42	19569	. . SPRING, Helical, extension	1
-43	21504	. . SPRING, Helical, extension	2
	19674	. . LEVER ASSEMBLY (Right hand)	1
	19668	. . LEVER ASSEMBLY (Left hand).	1
		(ATTACHING PARTS)	
-44	17326	. . RING, Retaining (WKI)(5133-12-C-MF)	2
-45	17768	. . WASHER, Flat	AR
		- - - * - - -	
-46	19568	. . . PAWL (Right hand)	1
-47	19571	. . . PAWL (Left hand)	1
		(ATTACHING PARTS)	
-48	103(1/4)	. . . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg.	2
-49	5727	. . . WASHER, Spring tension	2
-50	19574	. . . WASHER, Shouldered.	2
-51	17742	. . . RING, Retaining (WKI)(5100-18-C)	2
-52	19551	. . . POST, Threaded.	2
		- - - * - - -	
-53	19570	. . . SPRING, Helical, torsion.	2
-53A[1]	—	. . . LEVER, Right hand	1
-53B[1]	—	. . . LEVER, Left hand	1
-54	19442	. . SPRING, Helical, extension	4
-55	15181	. . NUT, Round	2
-56	16088	. . WASHER, Flat	6
-57	19572	. . PLATE, Indexing.	2
-58	19447	. . RATCHET ASSEMBLY (Right hand)	1
-59	19446	. . RATCHET ASSEMBLY (Left hand)	1
-60	19573	. . BUSHING	2
-61	20624	. . BEARING, Ball (ND)(SSRS77NR4HGZD-1228E)	2
		(ATTACHING PARTS)	
-62	20622	. . WASHER, Flat	2
-63	20623	. . RING, Retaining (WKI)(5101-62-W)	2
		- - - * - - -	
-64	19443	. . PLATE	2
-65	19478	. . STUD, Threaded	2
-66	19669	. . PLATE	1
		(ATTACHING PARTS)	
-67	503(5/16)	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . . washer, ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	3
		- - - * - - -	

[1]Nonprocurable part.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
3-68	19374	. . POST	4
-69	19336	. . PLATE, Contact	2
-70	19661	. . PANEL	1
-71	19623	. DIAL	1
-72	19624	. DIAL	1
-73	19650	. SPRING, Tension	2
		(ATTACHING PARTS)	
-74	503(3/16)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	8
		- - - * - - -	
-75	19657(*)[1]	. CRYSTAL UNIT, Quartz	20
-76	19658(*)[1]	. CRYSTAL UNIT, Quartz	18
-77	19473	. GEAR-CAM SUBASSEMBLY	1
		(ATTACHING PARTS)	
-78	20625	. RING, Retaining (WKI)(5101-56-W)	1
-79	21322	. WASHER, Flat	1
		- - - * - - -	
-80	21373	. PLATE SUBASSEMBLY	1
		(ATTACHING PARTS)	
-81	336(1/8)	. SETSCREW, Fluted socket dr, flat point, sst, 6-32 thd by 1/8 in. lg	1
-82	10274	. DISC	1
		- - - * - - -	
	19372	. PLATE SUBASSEMBLY	1
		(ATTACHING PARTS)	
-83	503(1/4)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	8
-84	504(9/32)	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-85	20620	. . BEARING, Ball (ND)(SSRS77NR3HGZD1228E)	1
		(ATTACHING PARTS)	
-86	20625	. . RING, Retaining (WKI)(5101-56-W)	1
-87	20621	. . WASHER, Flat, al aly, 0.565 ID by 0.781 OD by 0.032 in. thk	1
		- - - * - - -	
-88	8796(120)	. . CAPACITOR, Fixed, ceramic, 120 $\mu\mu$f ±5 per cent, 500 vdcw	1
-89	8877(0.68)	. . CHOKE, RF, 0.68 μh ±20 per cent (JFE)(10100-628)	1
-90	21303	. . TERMINAL BLOCK	1
		(ATTACHING PARTS)	
-91	103(1/2)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/2 in. lg	2
-92	4561	. . NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk	2
-93	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-94	19380	. . TERMINAL BLOCK	1
		(ATTACHING PARTS)	
-95	103(1/2)	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/2 in. lg	2
-96	4561	. . NUT, Plain hex, brs, ni pl, 3-48 thd by 0.062 in. thk	2
-97	13473	. . WASHER, Spring tension	2
		- - - * - - -	
-98	201(10K)	. . RESISTOR, Fixed, comp, 10,000 ohms ±5 per cent, 1/2w (AB) (EB1035)	1
-99	201(1K)	. . RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 1/2w (AB)(EB1025)	1
-100	—	. . PLATE, Mounting, consists of 1 post 19375, 2 posts 19376, 4 inserts 5139, 4 inserts 16487, and 1 plate 19373	1

[1] Insert crystal frequency in megacycles in place of (*) to complete part number.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
5-	22328-0014	TRANSMITTER SUBASSEMBLY, 14V (see 73, Figure 2)	Ref
5-	22328-0028	TRANSMITTER SUBASSEMBLY, 28V (see 73, Figure 2)	Ref
-1	22367-0014	. TUNER ASSEMBLY, 14V (see Figure 6)	1
-1	22367-0028	. TUNER ASSEMBLY, 28V (see Figure 6)	1
		(ATTACHING PARTS)	
-2	504-0124	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 1-3/8 in. lg (SH)(SEMS)	2
-3	19647	. POST, Threaded	1
-4	7730	. WASHER, Spring tension	1
		- - - * - - -	
-5	19624	. DIAL	1
-6	19623	. DIAL	1
-7	19650	. SPRING, Tension	2
		(ATTACHING PARTS)	
-8	503-0012	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	8
		- - - * - - -	
-9	[1] 19658-*	. CRYSTAL UNIT, Quartz	18
-10	[1] 19657-*	. CRYSTAL UNIT, Quartz	20
-11	21373	. PLATE SUBASSEMBLY.	1
		(ATTACHING PART)	
-12	336-0008	. SETSCREW, Fluted socket dr, fp, sst, 6-32 thd by 1/8 in. lg	1
		- - - * - - -	
-13	19473	. GEAR-CAM ASSEMBLY	1
		(ATTACHING PARTS)	
-14	20625	. RING, Retaining (WKI)(5101-56-W).	1
-15	21322	. WASHER, Flat.	1
		- - - * - - -	
—	[2] 22075	. PLATE SUBASSEMBLY, Mounting.	1
		(ATTACHING PARTS)	
-16	504-0018	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	2
-17	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	4
		- - - * - - -	
-18	18052	. . TRANSFORMER, Output (CMPB)(L1671)	1
		(ATTACHING PARTS)	
-19	103-0012	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg	2
-20	10284	. . TERMINAL ASSEMBLY	1
-21	14378	. . TERMINAL ASSEMBLY	1
-22	4103	. . WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk. (SH)(1703)	2
		- - - * - - -	
-23	8626-9474	. . CAPACITOR, Fixed, ceramic, 0.0047 μf ±20 per cent, 500 vdcw. (AB)(36-472W)	1
-24	8627-9153	. . CAPACITOR, Fixed, ceramic, 0.015 μf ±20 per cent, 500 vdcw . (AB)(40-153W)	1
-25	201-0333	. . RESISTOR, Fixed, comp, 33,000 ohms ±5 per cent, 1/2w (AB). (EB3335)	1
-26	20620	. . BEARING, Ball (ND)(SSRS77NR3HGZD1228E).	1
		(ATTACHING PARTS)	
-27	20625	. . RING, Retaining (WKI)(5101-56-W)	1
-28	20621	. . WASHER, Flat	1
		- - - * - - -	
-29	8796-0121	. CAPACITOR, Fixed, ceramic, 120 $\mu\mu$f ±5 per cent, 500 vdcw	1
-30	8877-9682	. CHOKE, RF, 0.68 μh ±20 per cent (JFE)(10100-628).	1
-31	21303	. TERMINAL BLOCK	2
		(ATTACHING PARTS)	
-32	103-0012	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg	4
-33	4561	. NUT, Hexagon, brs, ni pl, 3-48 thd by 0.062 in. thk.	4
-34	13473	. WASHER, Spring tension	4
		- - - * - - -	

[1] Specify crystal frequency in megacycles in place of * to complete part number.
[2] Nonprocurable part.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
5-35	22330	. CLAMP, Electron tube	1
-36	700-0121	. ELECTRON TUBE, Type 5686	1
-37	201-0273	. RESISTOR, Fixed, comp, 27,000 ohms ±5 per cent, 1/2w (AB) (EB2735)	1
-38	22206	. COIL, 6.0 μh	1
-39	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	2
-40	201-0221	. RESISTOR, Fixed, comp, 220 ohms ±5 per cent, 1/2w (AB) (EB2215)	1
-41	201-0153	. RESISTOR, Fixed, comp, 15,000 ohms ±5 per cent, 1/2w (AB) (EB1535)	1
-42	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	1
-43	8870-0510	. CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw	1
-44	21547	. SOCKET, Electron tube. (ATTACHING PARTS)	1
-45	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
-46	14699	. TERMINAL ASSEMBLY.	2
-47	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH) (1703)	2
		- - - * - - -	
-48	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	1
-49	203-0221	. RESISTOR, Fixed, comp, 220 ohms ±5 per cent, 2w (AB)(HB2215).	1
-50	14699	. TERMINAL ASSEMBLY. (ATTACHING PARTS)	1
-51	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	1
-52	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH) (1703)	1
		- - - * - - -	
-53	21556	. CLAMP, Electron tube	1
-54	700-0204	. ELECTRON TUBE, Type 6360	1
-55	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw (used in 28V unit only)	1
-56	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	1
-57	201-0333	. RESISTOR, Fixed, comp, 33,000 ohms ±5 per cent, 1/2w (AB) (EB3335)	1
-58	201-0752	. RESISTOR, Fixed, comp, 7500 ohms ±5 per cent, 1/2w (AB) (EB7525)	1
-59	8796-0121	. CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw	2
-60	22206	. COIL, 6.0 μh	2
-61	8791-0200	. CAPACITOR, Fixed, ceramic, 20 μμf ±2 per cent, 500 vdcw	2
-62	21547	. SOCKET, Electron tube. (ATTACHING PARTS)	1
-63	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
-64	14378	. TERMINAL ASSEMBLY.	2
-65	4103	. WASHER, Lock, sst, 0.105 ID by 0.220 OD by 0.016 in. thk (SH) (1703)	2
		- - - * - - -	
-66	(1)	. PLATE	1
-67	19465	. PLATE ASSEMBLY	1
-68	15453	. TERMINAL, Stud (ATTACHING PARTS)	2
-69	504-0012	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 3/16 in. lg (SH)(SEMS)	2
		- - - * - - -	
-70	19419	. BEARING (ATTACHING PARTS)	4
-71	304-0008	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg (supplied w/70, Figure 5)	4
		- - - * - - -	

[1] Nonprocurable part.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
5-72	6376	. WASHER, Flat, sst, 0.130 ID by 0.219 OD by 0.0062 in. thk . . .	AR
-73	19626	. SPRING, Helical extension	1
-74	19424	. CAM	1
		(ATTACHING PARTS)	
-75	306-0008	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/8 in. lg	2
		- - - * - - -	
-76	21482	. SHAFT	1
-77	14785	. SPRING, Helical extension	3
-78	4023	. TERMINAL, Lug.	2
-79	4548	. TERMINAL, Lug.	2
-80	4391	. TERMINAL, Lug.	1
-81	19467	. ARM ASSEMBLY.	5
-82	19645	. BLOCK	5
		(ATTACHING PARTS)	
-83	304-0008	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	5
		- - - * - - -	
-84	6376	. WASHER, Flat, sst, 0.130 ID by 0.219 OD by 0.0062 in. thk . . .	AR
-85	5394	. SPACER	1
-86	19367	. LEVER SUBASSEMBLY.	1
		(ATTACHING PART)	
-87	17326	. RING, Retaining (WKI)(5133-12-C-MF)	1
		- - - * - - -	
—	22243	. PLATE ASSEMBLY, Oscillator	1
		(ATTACHING PARTS)	
-88	504-0018	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 9/32 in. lg (SH)(SEMS)	1
-89	164-0020	. SCREW, Machine, fil h, brs, ni pl, 4-40 thd by 5/16 in. lg . . .	1
-90	8543	. WASHER, Lock	1
		- - - * - - -	
-91	8870-0510	. . CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw . . . (EMM)(VTDM-15-51)	1
-92	19603	. . CAPACITOR, Variable, air dielectric.	1
		(ATTACHING PARTS)	
-93	103-0012	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 3/16 in. lg.	2
		- - - * - - -	
-94	22637	. . INSULATOR, Standoff (CGT)(X2128-F).	1
		(ATTACHING PART)	
-95	503-0010	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	1
		- - - * - - -	
-96	200-0221	. . RESISTOR, Fixed, comp, 220 ohms ±10 per cent, 1/4w (AB). . (CB2211)	2
-97	200-0333	. . RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w . . (AB)(CB3331)	1
-98	204-0100	. . RESISTOR, Fixed, comp, 10 ohms ±10 per cent, 1/4w (GBR) . (997CX10)	1
-99	8870-0510	. . CAPACITOR, Fixed, mica, 51 $\mu\mu$f ±5 per cent, 500 vdcw . . . (EMM)(VTDM-15-51)	1
-100	201-0333	. . RESISTOR, Fixed, comp, 33,000 ohms ±5 per cent, 1/2w (AB). (EB3335)	1
-101	201-0203	. . RESISTOR, Fixed, comp, 20,000 ohms ±5 per cent, 1/2w (AB). (EB2035)	1
-102	8832	. . CAPACITOR, Fixed, ceramic, 1000 $\mu\mu$f ±20 per cent, 500 . . vdcw (SLM)(CF-100-2-1022)	3
-103	700-0136	. . ELECTRON TUBE, Type 6021	1
-104	—	. . PLATE.	1
-105	19923	. COIL	1
-106	19620	. COIL	1
-107	8765-0240	. CAPACITOR, Fixed, ceramic, 24 $\mu\mu$f ±2 per cent, 500 vdcw. . .	2
-108	8791-0200	. CAPACITOR, Fixed, ceramic, 20 $\mu\mu$f ±2 per cent, 500 vdcw. . .	1
-109	9280	. CAPACITOR, Fixed, ceramic, 2 $\mu\mu$f ±5 per cent	1
-110	21326	. CAPACITOR, Variable, air dielectric	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
5-111	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-112	104-0012	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg	1
		- - - * - - -	
—	22294	. PLATE ASSEMBLY, Mixer	1
		(ATTACHING PARTS)	
-113	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	3
		- - - * - - -	
-114	209-0006	. . RESISTOR, Fixed, ww, 126 ohms ±3 per cent, 3w (DABU) (RS-2-126)	1
-115	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw (SLM)(CF-100-2-1022)	1
-116	8870-0241	. . CAPACITOR, Fixed, mica, 240 μμf ±5 per cent, 500 vdcw (EMM)(VTDM-15-240)	2
-117	8877-9101	. . CHOKE, RF, 1 μh ±20 per cent (JFE)(10100-630)	2
-118	200-0102	. . RESISTOR, Fixed, comp, 1000 ohms ±10 per cent, 1/4w (AB) (CB1021)	3
-119	14141	. . CHOKE, RF, 3 μh ±10 per cent (JFE)(10100-652)	1
-120	200-0223	. . RESISTOR, Fixed, comp, 22,000 ohms ±10 per cent, 1/4w (AB) (CB2231)	2
-121	200-0104	. . RESISTOR, Fixed, comp, 100,000 ohms ±10 per cent, 1/4w (AB)(CB1041)	1
-122	8625-9224	. . CAPACITOR, Fixed, ceramic, 0.0022 μf ±20 per cent, 500 vdcw (AB)(24-222W)	1
-123	8765-0240	. . CAPACITOR, Fixed, ceramic, 24 μμf ±2 per cent, 500 vdcw	2
-124	700-0136	. . ELECTRON TUBE, Type 6021	1
-125	700-0122	. . ELECTRON TUBE, Type 5718	1
-126	14141	. . CHOKE, RF, 3 μh ±10 per cent (JFE)(10100-652)	2
-127	—	. . PLATE	1
-128	20620	. BEARING, Ball (ND)(SSRS77NR3HGZD1228E)	1
		(ATTACHING PARTS)	
-129	20625	. RING, Retaining (WKI)(5101-56-W)	1
-130	21322	. WASHER, Flat.	1
		- - - * - - -	
-131	19451	. BRACKET ASSEMBLY	1
		(ATTACHING PARTS)	
-132	304-0008	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
-133	10290	. DISC	1
		- - - * - - -	
-134	20612	. SPRING, Helical, compression	1
-135	200-0333	. RESISTOR, Fixed, comp, 33,000 ohms ±10 per cent, 1/4w (AB) (CB3331)	1
-136	8791-9701	. CAPACITOR, Fixed, ceramic, 7 μμf ±0.25 μμf, 500 vdcw	1
-137	8791-9401	. CAPACITOR, Fixed, ceramic, 4 μμf ±0.25 μμf, 500 vdcw	1
-138	8791-0200	. CAPACITOR, Fixed, ceramic, 20 μμf ±2 per cent, 500 vdcw	2
-139	201-0622	. RESISTOR, Fixed, comp, 6200 ohms ±5 per cent, 1/2w (AB) (EB6225)	1
-140	19619	. COIL	1
-141	21326	. CAPACITOR, Variable, air dielectric	1
		(ATTACHING PARTS)	
-142	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-143	104-0012	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg	1
		- - - * - - -	
—	22299	. PLATE ASSEMBLY, Amplifier	1
		(ATTACHING PARTS)	
-144	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
5-145	8796-0121	. . CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw .	4
-146	201-0472	. . RESISTOR, Fixed, comp, 4700 ohms ±5 per cent, 1/2w (AB) . (EB4725)	1
-147	22637	. . INSULATOR, Standoff (CGT)(X2128-F). . . . . (ATTACHING PARTS)	2
-148	503-0010	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-149	8627-9103	. . CAPACITOR, Fixed, ceramic, 0.01 μf ±20 per cent, 500 vdcw. (AB)(36-103W)	1
-150	14141	. . CHOKE, RF, 3 μh ±10 per cent (JFE)(10100-652)	1
-151	22206	. . COIL.	1
-152	19584	. . BEARING. . . . . (ATTACHING PART)	1
-153	16171	. . RING, Retaining (WKI)(5100-25-W)	1
		- - - * - - -	
-154	201-0102	. . RESISTOR, Fixed, comp, 1000 ohms ±5 per cent, 1/2w (AB). . (EB1025)	1
-155	700-0129	. . ELECTRON TUBE, Type 5840	1
-156	—	. . PLATE	1
-157	203-0562	. RESISTOR, Fixed, comp, 5600 ohms ±5 per cent, 2w (AB)(HB5625)	1
-158	8870-0510	. CAPACITOR, Fixed, mica, 51 μμf ±5 per cent, 500 vdcw (EMM) . (VTDM-15-51)	1
-159	19620	. COIL	1
-160	21326	. CAPACITOR, Variable, air dielectric . . . . . (ATTACHING PARTS)	1
-161	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-162	104-0012	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . .	1
		- - - * - - -	
—	22384	. PLATE ASSEMBLY, Driver. . . . . (ATTACHING PARTS)	1
-163	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-164	8796-0121	. . CAPACITOR, Fixed, ceramic, 120 μμf ±5 per cent, 500 vdcw .	1
-165	8625-9224	. . CAPACITOR, Fixed, ceramic, 0.0022 μf ±20 per cent, 500 . . vdcw (AB)(24-222W)	1
-166	8832	. . CAPACITOR, Fixed, ceramic, 1000 μμf ±20 per cent, 500 vdcw (SLM)(CF-100-2-1022)	1
-167	22637	. . INSULATOR, Standoff (CGT)(X-2128-F) . . . . . (ATTACHING PARTS)	2
-168	503-0010	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-169	—	. . PLATE.	1
-170	19448	. PLATE ASSEMBLY, Tuning. . . . . (ATTACHING PARTS)	1
-171	304-0008	. SETSCREW, Fluted socket dr, cup point, sst, 4-40 thd by 1/8 in. lg	1
-172	10290	. DISC	1
		- - - * - - -	
-173	19659	. SHAFT	1
-174	10281	. CAPACITOR, Fixed, ceramic, 0.2 μμf	1
-175	8877-9101	. CHOKE, RF, 1.0 μh ±20 per cent (JFE)(10100-630)	1
-176	22142	. COIL	1
-177	8791-9801	. CAPACITOR, Fixed, ceramic, 8 μμf ±0.25 μμf, 500 vdcw. . . .	1
-178	19639	. CAPACITOR, Variable, air dielectric . . . . . (ATTACHING PARTS)	1
-179	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	1
-180	104-0012	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . .	1
		- - - * - - -	

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
—	21972	. PLATE ASSEMBLY, Power amplifier . . . . . (ATTACHING PARTS)	1
5-181	503-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 1/4 in. lg (SH)(SEMS)	2
		- - - * - - -	
-182	201-0273	. . RESISTOR, Fixed, comp, 27,000 ohms ±5 per cent, 1/2w (AB). (EB2735)	2
-183	19584	. . BEARING. . . . . (ATTACHING PART)	1
-184	16171	. . RING, Retaining (WKI)(5100-25-W)	1
		- - - * - - -	
-185	207-0500	. . RESISTOR, Fixed, ww, 50 ohms ±5 per cent, 5w (WAL)(5X50) . (used in 28V unit)	1
-186	209-9201	. . RESISTOR, Fixed, ww, 2 ohms ±3 per cent, 3w (DABU). . . . (RS-2-2)(used in 28V unit)	1
-187	22637	. . INSULATOR, Standoff (CGT)(X-2128-F) . . . . . (ATTACHING PARTS)	2
-188	503-0010	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-189	—	. . PLATE.	1
-190	22206	. CHOKE, RF.	1
-191	21833	. COIL	1
-192	19420	. CAPACITOR, Variable, air dielectric . . . . . (ATTACHING PARTS)	1
-193	504-0014	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 7/32 in. lg (SH)(SEMS)	2
		- - - * - - -	
-194	8625-9224	. CAPACITOR, Fixed, ceramic, 0.0022 μf ±20 per cent, 500 vdcw . (AB)(24-222W)	1
-195	21876	. PLATE ASSEMBLY . . . . . (ATTACHING PARTS)	1
-196	504-0016	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	2
-197	104-0014	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 7/32 in. lg . .	2
		- - - * - - -	
-198	18045	. . INSULATOR, Standoff (CGT)(X2045-F4) . . . . . (ATTACHING PARTS)	1
-199	504-0016	. . SCREW, Assembled washer, bind hd, brs screw, sst lock- . . washer, ni pl, 4-40 thd by 1/4 in. lg (SH)(SEMS)	1
-200	8927-0004	. . TERMINAL, Lug	1
		- - - * - - -	
-201	—	. . PLATE.	1
-202	22194	. PLATE	1

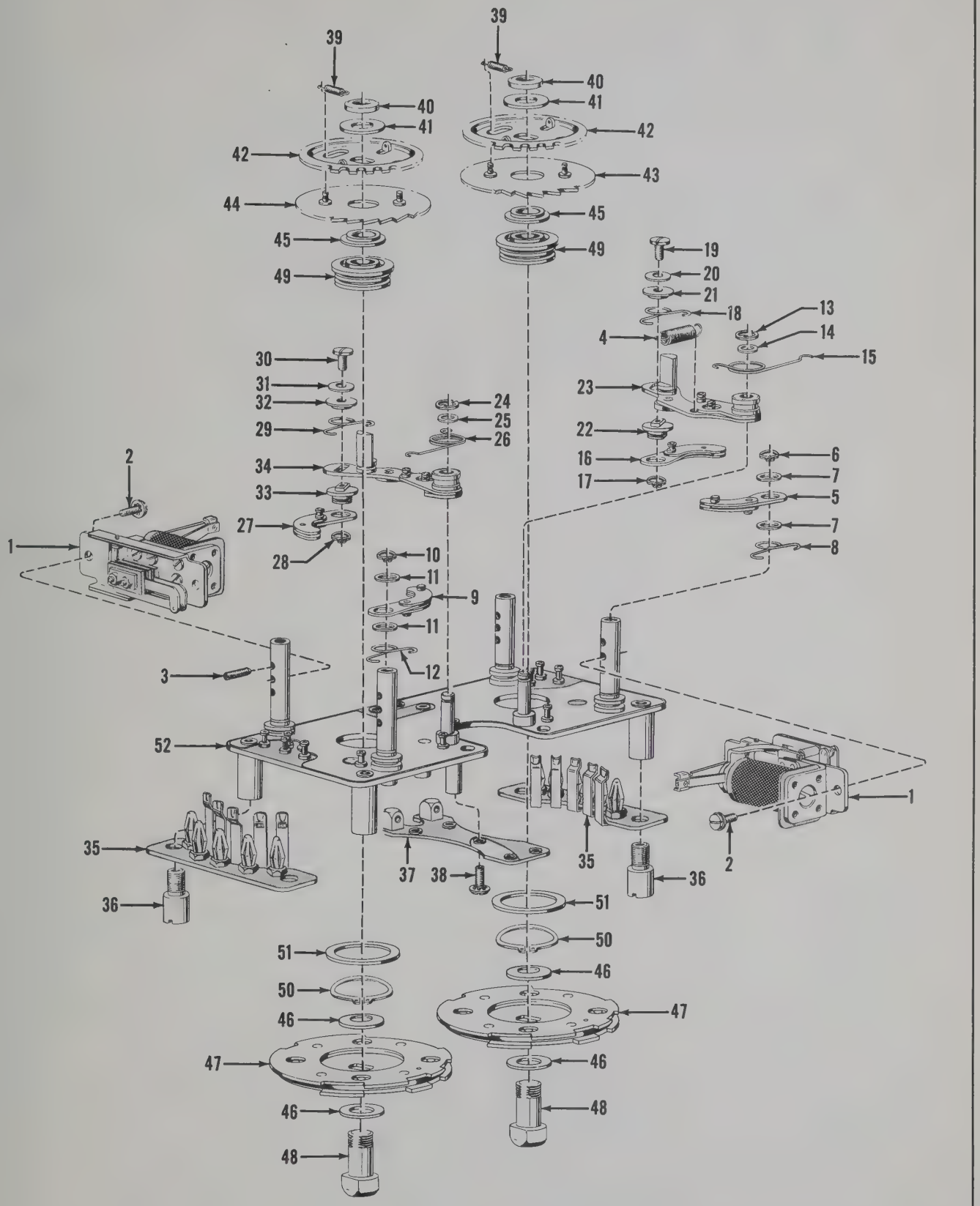


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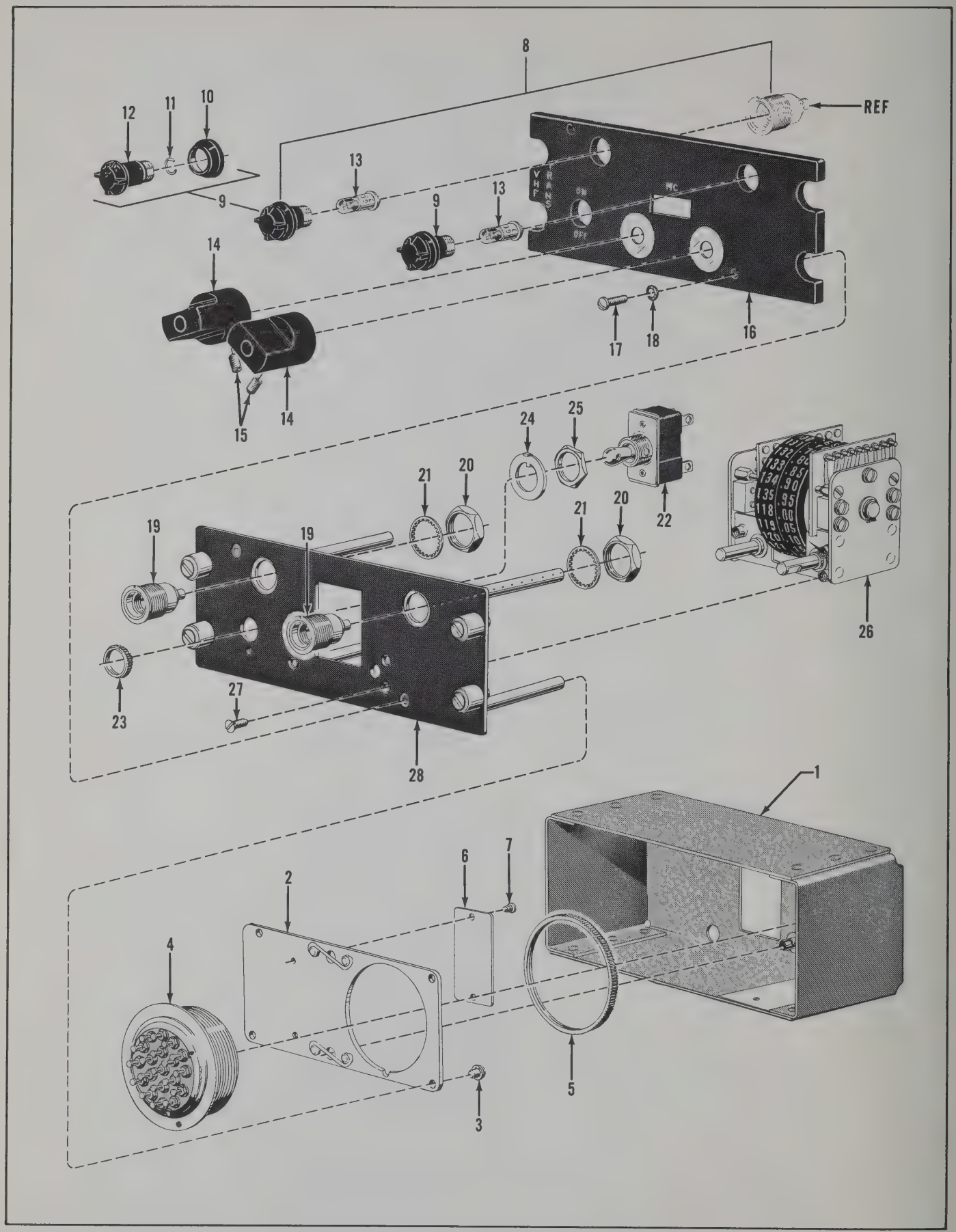
Figure 6. Tuner Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-	22367-0014	TUNER ASSEMBLY, 14V (see 1, Figure 5)	Ref
6-	22367-0028	TUNER ASSEMBLY, 28V (see 1, Figure 5)	Ref
-1	19664	. RELAY, Armature, 14V	2
-1	19665	. RELAY, Armature, 28V	2
		(ATTACHING PARTS)	
-2	503-0020	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-3	314-0016	. SETSCREW, Fluted socket dr, cone point, sst, 4-40 thd by 1/4 in. lg	8
-4	19569	. SPRING, Helical, extension	1
-5	19571	. PAWL, Right hand	1
		(ATTACHING PARTS)	
-6	17742	. RING, Retaining (WKI)(5100-18-C)	1
-7	17765	. WASHER, Flat.	2
		- - - * - - -	
-8	19566	. SPRING, Helical, torsion	1
-9	19568	. PAWL, Left hand	1
		(ATTACHING PARTS)	
-10	17742	. RING, Retaining (WKI)(5100-18-C)	1
-11	17765	. WASHER, Flat.	2
		- - - * - - -	
-12	19566	. SPRING, Helical, torsion	1
—	19674	. LEVER ASSEMBLY, Right hand	1
		(ATTACHING PARTS)	
-13	17326	. RING, Retaining (WKI)(5133-12-C-MF)	1
-14	17768	. WASHER, Flat.	AR
		- - - * - - -	
-15	19570	. . SPRING, Helical, torsion	1
-16	19568	. . PAWL	1
		(ATTACHING PART)	
-17	17742	. . RING, Retaining (WKI)(5100-18-C)	1
		- - - * - - -	
-18	21504	. . SPRING, Helical, torsion	1
		(ATTACHING PARTS)	1
-19	103-0016	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg .	1
-20	5727	. . WASHER, Spring tension	1
-21	19574	. . WASHER, Shouldered	1
-22	19551	. . POST, Threaded	1
		- - - * - - -	
-23	(1)	. . LEVER, Right hand	1
	19668	. LEVER ASSEMBLY, Left hand	1
		(ATTACHING PARTS)	
-24	17326	. RING, Retaining (WKI)(5133-12-C-MF)	1
-25	17768	. WASHER, Flat.	AR
		- - - * - - -	
-26	19570	. . SPRING, Helical, torsion	1
-27	19571	. . PAWL	1
		(ATTACHING PART)	
-28	17742	. . RING, Retaining (WKI)(5100-18-C)	1
		- - - * - - -	
-29	21504	. . SPRING, Helical, torsion	1
		(ATTACHING PARTS)	
-30	103-0016	. . SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg .	1
-31	5727	. . WASHER, Spring tension	1
-32	19574	. . WASHER, Shouldered	1
-33	19551	. . POST, Threaded	1
		- - - * - - -	
-34	(1)	. . LEVER, Left hand.	1
-35	19336	. PLATE, Contact	2
		(ATTACHING PARTS)	
-36	19374	. POST, Threaded	4
		- - - * - - -	

[1] Nonprocurable part.

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
6-37	19669	. PLATE	1
		(ATTACHING PARTS)	
-38	503-0020	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/16 in. lg (SH)(SEMS)	3
		- - - * - - -	
-39	19442	. SPRING, Helical, extension	4
-40	15181	. NUT, Round	2
-41	16088	. WASHER, Flat	2
-42	19572	. PLATE, Indexing	2
-43	19447	. RATCHET ASSEMBLY, Right hand	1
-44	19446	. RATCHET ASSEMBLY, Left hand	1
-45	19573	. BUSHING	2
-46	16088	. WASHER, Flat	4
-47	19443	. PLATE	2
-48	19478	. STUD, Threaded	2
-49	20624	. BEARING, Ball (ND)(SSRS77NR4HGZD-1228E)	2
		(ATTACHING PARTS)	
-50	20623	. RING, Retaining (WKI)(5101-62-W)	2
-51	20622	. WASHER, Flat	2
		- - - * - - -	
-52	19661	. PANEL	1



TP1747

Figure 7. C-82A Control Unit Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
7-	21590	CONTROL UNIT ASSEMBLY, ARC Type C-82A (see Figure 1) . . .	1
-1	20375	. COVER ASSEMBLY	1
-2	20343	. PLATE ASSEMBLY, Mounting. . . . . (ATTACHING PARTS)	1
-3	503-0012	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	4
		- - - * - - -	
-4	12357	. CONNECTOR, Receptacle, electrical . . . . . (ATTACHING PART)	1
-5	5310	. NUT, Knurled (supplied with 4, Figure 7).	1
		- - - * - - -	
-6	21774	. PLATE, Identification . . . . . (ATTACHING PARTS)	1
-7	8081	. SCREW, Tapping, thread forming, rh, Phillips dr, stl, blk . . . parkerized, No. 2 by 5/32 in. lg (PK)(Z)	2
		- - - * - - -	
-8	16293	. LIGHT ASSEMBLY, Panel (GMC)(A-5890)	2
-9	—	. . LAMP HOUSING ASSEMBLY (GMC)(A-5181)	2
-10	—	. . . GROMMET, Panel light (GMC)(A-4846A)	2
-11	—	. . . SPRING, Lamp retainer (GMC)(A-3674)	2
-12	—	. . . LAMP HOUSING AND FILTER ASSEMBLY (GMC)(A-5178) .	2
-13	8622	. LAMP, Incandescent, 28V, T—1-3/4 bulb (GE)(327).	2
-13	21760	. LAMP KIT, c/o two lamps (GE)(330)(used in 14V unit)	1
-14	20403	. KNOB. . . . . (ATTACHING PARTS)	2
-15	306-0016	. SETSCREW, Fluted socket dr, cup point, sst, 6-32 thd by 1/4 in.. lg (supplied w/14, Figure 7)	4
		- - - * - - -	
-16	21730	. PANEL, Printed. . . . . (ATTACHING PARTS)	1
-17	113-0024	. SCREW, Machine, bind hd, brs, blk oxidized, 3-48 thd by 3/8 in. lg	2
-18	10353	. WASHER, Spring tension	2
		- - - * - - -	
-19	—	. RETAINER, Lamp housing (p/o 8, Figure 7)(GMC)(A-4996). . . . (ATTACHING PARTS)	2
-20	—	. NUT, Hexagon, 15/32-32 thd (supplied w/8, Figure 7).	2
-21	—	. WASHER, Lock (supplied w/8, Figure 7)	2
		- - - * - - -	
-22	8084	. SWITCH, Toggle, SPST (CUT)(8908K142) . . . . . (ATTACHING PARTS)	1
-23	—	. NUT, Round (CUT)(15-124)	1
-24	21103	. WASHER, Key.	1
-25	—	. NUT, Hexagon (CUT)(815-254).	1
		- - - * - - -	
-26	20380	. SWITCH ASSEMBLY . . . . . (ATTACHING PARTS)	1
-27	143-0020	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 5/16 in. lg	4
		- - - * - - -	
-28	21728	. PANEL ASSEMBLY	1

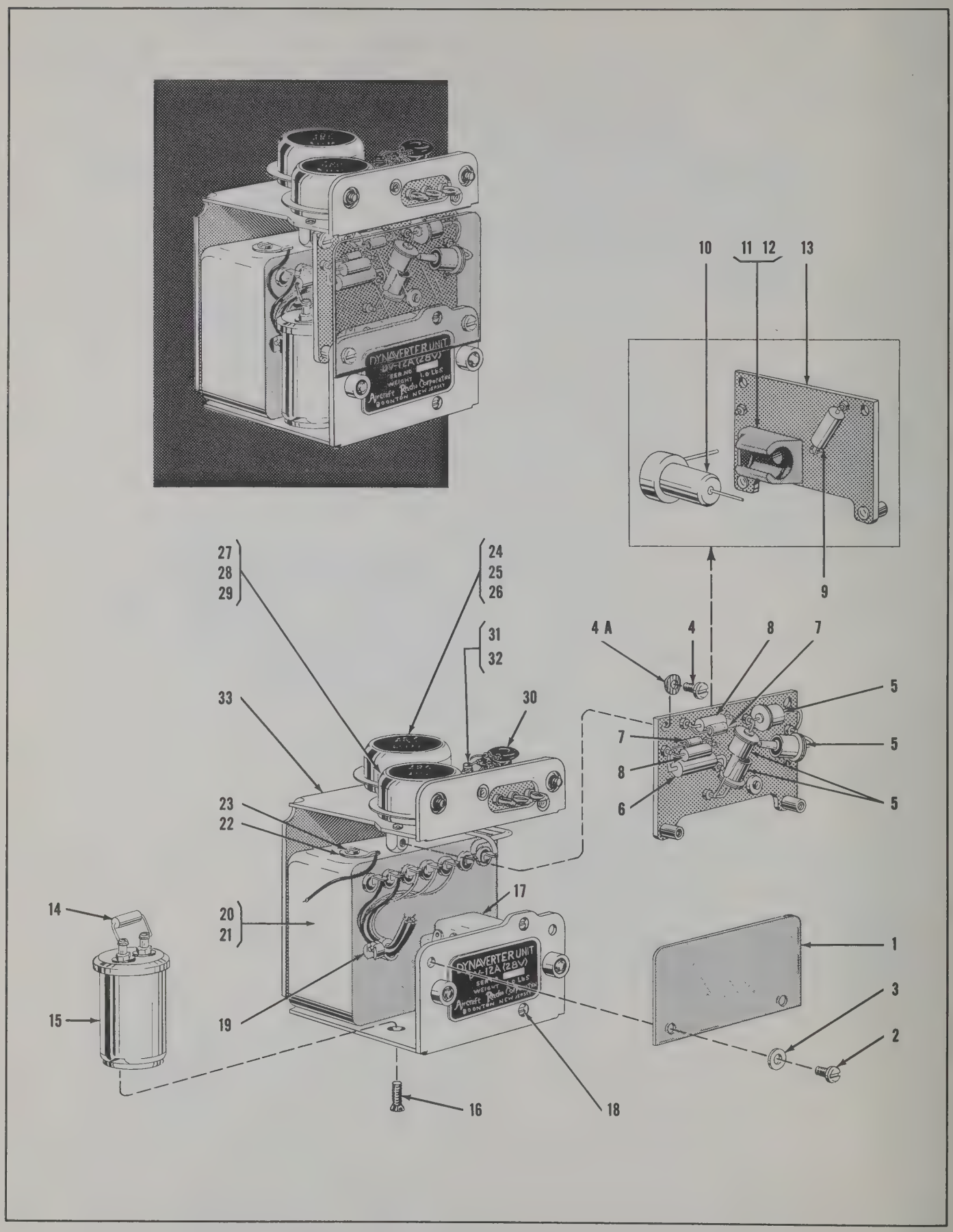


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Figure 8. DV-12A Dynaverter Assembly

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
8-	23400-0014	DYNAVERTER, ARC Type DV-12A (see Figure 1)	1
8-	23400-0028	DYNAVERTER, ARC Type DV-12A (see Figure 1)	1
-1	23851	. PLATE, Insulating	1
		(ATTACHING PARTS)	
-2	503-0012	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher, ni pl, 3-48 thd by 3/16 in. lg (SH)(SEMS)	2
-3	5103	. WASHER, Flat, brs, ni pl, 0.116 ID by 0.281 OD by 0.025 in. thk	2
		- - - * - - -	
	—	. COMPONENT BOARD SUBASSEMBLY	1
		(ATTACHING PARTS)	
-4	103-0016	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/4 in. lg . .	2
-4A	10353	. WASHER, Spring tension	2
		- - - * - - -	
-5	20474	. . SEMICONDUCTOR DEVICE, Diode, type 1N1560	4
-6	202-0272	. . RESISTOR, Fixed, comp, 2700 ohms ±5 per cent, 1w (used in 28V unit)(AB)(GB2725)	1
-6	202-0511	. . RESISTOR, Fixed, comp, 510 ohms ±5 per cent, 1w (used in 14V unit)(AB)(GB5115)	1
-7	21485-9101	. . CAPACITOR, Fixed, electrolytic, 1 μf ±20 per cent, 35 vdcw (SPR)(150D105X0035A2)	2
-8	201-0330	. . RESISTOR, Fixed, comp, 33 ohms ±5 per cent, 1/2w (used in 28V unit)(AB)(EB3305)	2
-8	201-0150	. . RESISTOR, Fixed, comp, 15 ohms ±5 per cent, 1/2w (used in 14V unit)(AB)(EB1505)	2
-9	202-0272	. . RESISTOR, Fixed, comp, 2700 ohms ±5 per cent, 1w (used in 28V unit)(AB)(GB2725)	1
-9	202-0511	. . RESISTOR, Fixed, comp, 510 ohms ±5 per cent, 1w (used in 14V unit)(AB)(GB5115)	1
-10	23943	. . CAPACITOR, Fixed, electrolytic, 60 μf -15 +75 per cent, 50 vdcw (FML)(F310)	1
-11	23626	. . CLIP	1
		(ATTACHING PART)	
-12	143-0012	. . SCREW, Machine, fh, brs, ni pl, 3-48 thd by 3/16 in. lg . . .	1
		- - - * - - -	
-13	23537	. . PLATE ASSEMBLY	1
-14	201-0224	. RESISTOR, Fixed, comp, 220,000 ohms ±5 per cent, 1/2w (AB) (EB2245)	1
-15	7582	. CAPACITOR, Fixed, electrolytic, 3 μf, 300 vdcw	1
		(ATTACHING PARTS)	
-16	143-0008	. SCREW, Machine, bind hd, brs, ni pl, 3-48 thd by 1/8 in. lg . .	2
		- - - * - - -	
-17	21429	. REACTOR (used in 28V unit)(CMPB)(L2254).	1
		(ATTACHING PARTS)	
-18	143-0016	. SCREW, Machine, fh, brs, ni pl, 3-48 thd by 1/4 in. lg	2
		- - - * - - -	
-19	23825	. CABLE TIE	1
-20	20424	. TRANSFORMER, Power, 28V (used in 28V unit)	1
-20	21155	. TRANSFORMER, Power, 14V (used in 14V unit)	1
		(ATTACHING PARTS)	
-21	144-0016	. SCREW, Machine, fh, brs, ni pl, 4-40 thd by 1/4 in. lg	3
		- - - * - - -	
-22	8927-0004	. TERMINAL, Lug (SH)(2104-04-00).	1
		(ATTACHING PART)	
-23	104-0012	. SCREW, Machine, bind hd, brs, ni pl, 4-40 thd by 3/16 in. lg . .	1
		- - - * - - -	
-24	20454	. TRANSISTOR (used in 28V unit)	1
-24	21153	. TRANSISTOR (used in 14V unit)	1
		(ATTACHING PARTS)	
-25	4180	. NUT, Hexagon, brs, ni pl, 10-32 thd by 0.094 in. thk	1
-26	4303	. WASHER, Flat, brs, ni pl, 0.200 ID by 0.437 OD by 0.038 in. thk	1
		- - - * - - -	
-27	20454	. TRANSISTOR (used in 28V unit)	1
-27	21153	. TRANSISTOR (used in 14V unit)	1

Figure & Index No.	ARC Part No.	1 2 3 4 5 6 Description	Units per Assy
		(ATTACHING PARTS)	
8-28	4180	. NUT, Hexagon, brs, ni pl, 10-32 thd by 0.094 in. thk	1
-29	4303	. WASHER, Flat, brs, ni pl, 0.200 ID by 0.437 OD by 0.038 in. thk	1
		- - - * - - -	
-30	8625-9224	. CAPACITOR, Fixed, ceramic, 0.0022 μf ±20 per cent, 500 vdcw . (AB)(24-222W)	2
-31	15453	. TERMINAL, Post	1
		(ATTACHING PART)	
-32	503-0010	. SCREW, Assembled washer, bind hd, brs screw, sst lockwasher,. ni pl, 3-48 thd by 5/32 in. lg (SH)(SEMS)	1
		- - - * - - -	
-33	23540	. BRACKET ASSEMBLY	1

SECTION III

NUMERICAL INDEX

Part No.	Figure & Index No.	Total Quantity
Component Board	(8-)	1
Lever Assembly	(6-)	1
Lever, Right hand	6-23	1
Lever, Left hand	6-34	1
Nut	7-20	2
Plate	5-169	1
Plate	5-189	1
Plate	5-201	1
Washer	7-21	1
A-3674	7-11	2
A-4846A	7-10	2
A-4996	7-19	2
A-5178	7-12	2
A-5181	7-9	2
A-5890	7-8	Ref
CB1021	3-11	Ref
	5-118	
CB1041	5-121	Ref
CB1221	3-6	Ref
CB2211	5-96	Ref
CB2231	5-120	Ref
CB3311	3-13	Ref
CB3321	3-8	Ref
CB3331	5-97	Ref
	5-135	
CB4701	3-10	Ref
CB4711	3-12	Ref
CB4731	4-20	Ref
CF-100-2-1022	5-102	Ref
	5-115	
	5-166	
DC-8-C-11	2-49	Ref
DC-8-C-51	2-49	Ref
EB1025	5-154	Ref
EB1035	4-5	Ref
EB1505	8-8	Ref
EB1535	5-41	Ref
EB2035	5-101	Ref
EB2205	4-4	Ref
EB2215	5-40	Ref
EB2245	8-14	Ref
EB2735	5-37	Ref
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EB4725	5-146	Ref
EB6225	5-139	Ref
EB7525	5-58	Ref
F310	8-10	Ref
GB1005	3-14	Ref
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GB2725	8-6	Ref
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GB5115	8-6	Ref
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GB5615	3-14	Ref
GLU1012SD3028L	3-43	Ref
GLU2512SD3028L	4-6	Ref
GLU5032SD3028L	4-10	Ref
HB1005	3-33	Ref
HB1215	3-33	Ref
HB2215	5-49	Ref
HB5625	5-157	Ref
HD6226	2-23	Ref
HZPR-10	3-40	Ref
HZPR-36	3-34	Ref
L1671	5-18	Ref
L2254	8-17	Ref
M-4721	3-45	3
	4-8	
	4-12	
M-4748	3-46	3
	4-9	
	4-13	
M-4761	3-44	3
	4-7	
	4-11	
RS-2-126	5-114	Ref
RS-2-2	5-186	Ref
SSRS77NR3HGZD1228E	5-26	Ref
	5-128	
SSRS77NR4HGZD1228E	6-49	Ref
VTDM-15-240	5-116	Ref
VTDM-15-51	5-91	Ref
	5-99	
	5-158	
X2045-F4	5-198	Ref
X2128-F	4-42	Ref
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	5-147	
	5-167	
	5-187	
Z	4-18	Ref
	7-7	
1N1560	8-5	Ref
1N90	4-22	Ref
10100-628	5-30	Ref
10100-630	5-117	Ref
	5-175	
10100-652	5-119	Ref
	5-126	
	5-150	
10281	4-19	2
	5-174	

Part No.	Figure & Index No.	Total Quantity
10284	5-20	1
10290	5-133	2
	5-172	
103-0012	2-35	13
	3-19	
	3-22	
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	5-32	
	5-93	
103-0016	6-19	4
	6-30	
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103-0018	2-38	1
103-0020	2-64	4
10353	2-36	3
	7-18	
104-0012	5-112	5
	5-143	
	5-162	
	5-180	
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104-0014	5-197	2
104-0016	2-60	7
	3-2	
104-0024	2-16	9
	3-27	
104-0108	2-45	2
105-601	4-26	Ref
106-0020	2-11	4
113-0024	7-17	2
12357	7-4	1
12517	4-34	1
12587	2-68	2
12588	2-68	2
12924	2-30	2
	2-33	
13046	2-43	1
13355	2-18	2
	2-63	
13473	3-20	8
	3-23	
	5-34	
14011	2-12	4
143-0008	4-36	4
	8-16	
143-0012	2-29	3
	2-32	
	8-12	
143-0014	4-43	2
	4-47	
143-0016	8-18	2
143-0020	7-27	4
14141	5-119	4
	5-126	
	5-150	
14378	5-21	3
	5-64	
144-0016	8-21	3
14484	4-35	1
14485	4-35	1
14556	2-28	1
14699	5-46	3
	5-50	

Part No.	Figure & Index No.	Total Quantity
14785	5-77	3
15-124	7-23	1
150D105X0035A2	8-7	Ref
150D200B1	3-7	Ref
15181	6-40	2
15185	4-23	2
154-0016	2-2	6
15453	5-68	3
	8-31	
15887	3-4	1
16-102W	4-21	Ref
16088	6-41	6
	6-46	
16171	5-153	2
	5-184	
16293	7-8	2
163-0016	2-54	4
164-0020	5-89	1
16965	2-14	3
1703	2-56	Ref
	2-67	
	4-44	
	4-48	
	5-22	
	5-47	
	5-52	
	5-65	
1704	2-17	Ref
	2-27	
	2-39	
	2-61	
	4-30	
17326	5-87	3
	6-13	
	6-24	
17742	6-6	4
	6-10	
	6-17	
	6-28	
17765	6-7	4
	6-11	
17768	6-14	AR
	6-25	
18045	5-198	1
18051	2-66	2
18052	5-18	1
18450	4-23	Ref
18800	2-49	1
18801	2-49	1
19336	6-35	2
19339	2-57	2
19367	5-86	1
19374	6-36	4
19419	5-70	4
19420	5-192	1
19424	5-74	1
19442	6-39	4
19443	6-47	2
19446	6-44	1
19447	6-43	1
19448	5-170	1
19451	5-131	1

Part No.	Figure & Index No.	Total Quantity
19465	5-67	1
19467	5-81	5
19473	5-13	1
19478	6-48	2
19542	2-51	1
19551	6-22	2
	6-33	
19566	6-8	2
	6-12	
19568	6-9	2
	6-16	
19569	6-4	1
19570	6-15	2
	6-26	
19571	6-5	2
	6-27	
19572	6-42	2
19573	6-45	2
19574	6-21	2
	6-32	
19584	5-152	2
	5-183	
19603	5-92	1
19619	5-140	1
19620	5-106	2
	5-159	
19623	5-6	1
19624	5-5	1
19626	5-73	1
19639	5-178	1
19645	5-82	5
19647	5-3	1
19650	5-7	2
[1] 19657-*	5-10	20
[1] 19658-*	5-9	18
19659	5-173	1
19661	6-52	1
19663	4-22	1
19664	6-1	2
19665	6-1	2
19669	6-37	1
19923	5-105	1
19668	(6-)	1
2N176	3-31	Ref
2N217	3-5	Ref
2N375	3-29	Ref
2N585	3-9	Ref
200-0102	3-11	4
	5-118	
200-0104	5-121	1
200-0122	3-6	1
200-0221	5-96	2
200-0223	5-120	2
200-0331	3-13	1
200-0332	3-8	1
200-0333	5-97	2
	5-135	
200-0470	3-10	1
200-0471	3-12	1
200-0473	4-20	1
201-0102	5-154	1
201-0103	4-5	1

Part No.	Figure & Index No.	Total Quantity
201-0150	8-8	2
201-0153	5-41	1
201-0203	5-101	1
201-0220	4-4	1
201-0221	5-40	1
201-0224	8-14	1
201-0273	5-37	3
	5-182	
201-0330	8-8	2
201-0333	5-25	3
	5-57	
	5-100	
201-0472	5-146	1
201-0622	5-139	1
201-0752	5-58	1
202-0100	3-14	2
	3-15	
202-0272	8-6	2
	8-9	
202-0511	8-6	2
	8-9	
202-0561	3-14	1
203-0100	3-33	1
203-0121	3-33	1
203-0221	5-49	1
203-0562	5-157	1
20343	7-2	1
20375	7-1	1
20380	7-26	1
204-0100	5-98	1
20403	7-14	2
20424	8-20	1
20454	8-24	2
	8-27	
20474	8-5	4
20612	5-134	1
20620	5-26	2
	5-128	
20622	6-51	2
20623	6-50	2
20624	6-49	2
20625	5-14	3
	5-27	
	5-129	
207-0500	5-185	1
20909	2-6	1
209-0006	5-114	1
209-9201	5-186	1
2104-04-00	8-22	Ref
21103	7-24	1
21153	8-24	2
	8-27	
21155	8-20	1
21303	5-31	2
21322	5-15	2
	5-130	
21326	5-110	3
	5-141	
	5-160	
21373	5-11	1
21429	8-17	1

[1] Specify crystal frequency in megacycles in place of * to complete part number.

Part No.	Figure & Index No.	Total Quantity
21482	5-76	1
21485-9101	8-7	2
21504	6-18	2
	6-29	
21547	5-44	2
	5-62	
21556	5-53	1
21590	7-	1
21600-0014	2-	1
21600-0028	2-	1
21614-0148	4-14	1
21621	5-28	1
21728	7-28	1
21730	7-16	1
21760	7-13	2
21774	7-6	1
21775	4-17	1
21776	4-17	1
21831	2-47	1
21833	5-191	1
21834	2-19	1
21837	4-3	1
21874	4-41	1
21876	5-195	1
21903	4-49	1
21952	2-9	1
21953	2-4	1
21954	4-45	1
21970	2-63	1
21972	(5-)	1
21984	2-40	1
22009	3-47	1
22075	(5-)	1
22138	4-16	1
22140	3-30	1
22141	3-26	1
22142	5-176	1
22146	4-40	1
22147	4-37	1
22151	2-70	1
22190	2-71	1
22194	5-202	1
22195-0014	2-58	1
22195-0028	2-58	1
22206	5-38	5
	5-60	
	5-151	
	5-190	
22243	(5-)	1
22270	3-28	8
22276-0014	2-24	1
	4-28	
22276-0028	2-24	1
	4-28	
22277-0014	2-44	1
22277-0028	2-44	1
22289	3-29	4
22290	3-31	1
22292	3-9	1
22293	3-5	1
22294	(5-)	1
22298-0360	3-34	1

Part No.	Figure & Index No.	Total Quantity
22299	(5-)	1
22317-0014	2-13	1
	4-	
22317-0028	2-13	1
	4-	
22328-0014	2-72	1
	5-	
22328-0028	2-72	1
	5-	
22330	5-35	1
22334	3-24	1
22335	3-1	1
22337-0014	2-10	1
	3-	
22337-0028	2-10	1
	3-	
22339	3-21	1
22340	3-18	1
22367-0014	5-1	1
	6-	
22367-0028	5-1	1
	6-	
22384	(5-)	1
22394	4-1	1
22637	4-42	9
	4-46	
	5-94	
	5-147	
	5-167	
	5-187	
22731	3-25	1
22734	2-53	4
23037	2-23	1
23400-0014	8-	1
23400-0028	8-	1
23537	8-13	1
23540	8-33	1
23626	8-11	1
23692	2-1	1
23825	8-19	1
23851	8-1	1
23943	8-10	1
24-222W	2-22	Ref
	5-122	
	5-165	
	5-194	
	8-30	
25346	3-18	Ref
25347	3-21	Ref
2544	2-37	1
3S2791G200N6	2-24	Ref
	4-28	
3S2791G200N9	2-24	Ref
	4-28	
304-0008	5-71	11
	5-83	
	5-132	
	5-171	
306-0008	5-75	2
306-0016	7-15	4
314-0016	6-3	8
327	7-13	Ref

Part No.	Figure & Index No.	Total Quantity
330	7-13	Ref
336-0008	5-12	1
36-103W	5-149	Ref
36-332W	3-17	Ref
36-472W	5-23	Ref
40-153W	5-24	Ref
40-203W	3-16	Ref
4023	5-78	2
4103	2-56	15
	2-67	
	4-44	
	4-48	
	5-22	
	5-47	
	5-52	
	5-65	
4180	3-35	4
	3-41	
	8-25	
	8-28	
4303	3-36	5
	3-42	
	8-26	
	8-29	
4391	5-80	1
4480	3-37	1
4548	5-79	2
4561	2-55	8
	5-33	
4697	4-33	1
5X50	5-185	Ref
502-0012	2-48	4
503-0010	2-50	13
	2-69	
	5-95	
	5-148	
	5-168	
	5-188	
	8-32	
503-0012	5-8	14
	7-3	
	8-2	
503-0016	2-20	19
	5-17	
	5-45	
	5-51	
	5-63	
	5-113	
	5-144	
	5-163	
	5-181	
503-0020	2-65	9
	6-2	
	6-38	
504-0012	5-69	2
504-0014	2-41	11
	5-111	
	5-142	
	5-161	
	5-179	
	5-193	

Part No.	Figure & Index No.	Total Quantity
504-0016	2-59	6
	5-196	
	5-199	
504-0018	3-32	5
	5-16	
	5-88	
504-0020	4-38	2
504-0024	2-15	3
504-0124	2-21	6
	5-2	
506-0024	4-2	4
	4-15	
5100-18-C	6-6	Ref
	6-10	
	6-17	
	6-28	
5100-25-W	5-153	Ref
	5-184	
5101-56-W	5-14	Ref
	5-27	
	5-129	
5101-62-W	6-50	Ref
5103	8-3	2
513-0014	2-5	2
5133-12-C-MF	5-87	Ref
	6-13	
	6-24	
514-0014	2-3	6
5219	2-42	1
5310	7-5	1
5394	5-85	1
5686	5-36	Ref
5718	5-125	Ref
5727	6-20	2
	6-31	
5840	5-155	Ref
6021	5-103	Ref
	5-124	
6360	5-54	Ref
6376	5-72	AR
	5-84	
700-0121	5-36	1
700-0122	5-125	1
700-0129	5-155	1
700-0136	5-103	2
	5-124	
700-0204	5-54	1
7582	8-15	1
7730	2-8	9
	2-46	
	3-3	
	5-4	
7736	2-26	2
	4-31	
8040	2-7	5
	2-25	
	4-29	
8081	4-18	4
	7-7	
8084	7-22	1
815-254	7-25	1

Part No.	Figure & Index No.	Total Quantity
8497	2-17	8
	2-27	
	2-39	
	2-61	
	4-30	
8543	5-90	1
8622	7-13	2
8625-9104	4-21	1
8625-9224	2-22	7
	5-122	
	5-165	
	5-194	
	8-30	
8626-9334	3-17	2
8626-9474	5-23	1
8627-9103	5-149	1
8627-9153	5-24	1
8627-9223	3-16	1
8765-0240	5-107	4
	5-123	
8791-0200	5-61	5
	5-108	
	5-138	
8791-9401	5-137	1
8791-9701	5-136	1
8791-9801	5-177	1
8796-0121	5-29	14
	5-39	
	5-42	
	5-48	
	5-55	

Part No.	Figure & Index No.	Total Quantity
8796-0121 (Cont)	5-56	
	5-59	
	5-145	
	5-164	
8803-5410	4-26	1
8832	5-102	5
	5-115	
	5-166	
8870-0241	5-116	2
8870-0510	5-43	4
	5-91	
	5-99	
	5-158	
8877-9101	5-117	3
	5-175	
8877-9682	5-30	1
8908K142	7-22	Ref
8914-0100	3-7	3
8915-0101	3-43	1
8915-0251	4-6	1
8915-0503	4-10	1
8923-0100	3-40	1
8927-0004	5-200	2
	8-22	
9280	5-109	1
9368	2-32	1
9391	4-32	1
94-42530	2-40	Ref
9542	2-34	2
997CX10	5-98	Ref

SECTION IV

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A102	5-1 6-	22367-0028
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A201	2-44	22277-0028
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A301	2-10 3-	22337-0028
B201	2-49	18800
B201	2-49	18801
C101	5-29	8796-0121
C102	5-99	8870-0510
C103	5-108	8791-0200
C104	5-91	8870-0510
C105	5-102	8832
C106	5-92	19603
C107	5-110	21326
C108	5-109	9280
C109	5-107	8765-0240
C110	5-107	8765-0240
C111	5-123	8765-0240
C112	5-123	8765-0240
C113	5-116	8870-0241
C114	5-116	8870-0241
C115	5-138	8791-0200
C116	5-138	8791-0200
C117	5-141	21326
C118	5-136	8791-9701
C119	5-137	8791-9401
C120	5-145	8796-0121
C121	5-145	8796-0121
C122	5-122	8625-9224
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C124	5-23	8626-9474
C125	5-158	8870-0510
C126	5-43	8870-0510
C127	5-160	21326
C128	5-24	8627-9153
C129	5-149	8627-9103
C130	5-174	10281
C131	5-39	8796-0121
C132	5-39	8796-0121
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C135	5-177	8791-9801

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C137	5-178	19639
C138	5-61	8791-0200
C139	5-48	8796-0121
C140	5-192	19420
C141	5-194	8625-9224
C142	5-102	8832
C143	5-102	8832
C144	4-19	10281
C145	5-115	8832
C146	5-145	8796-0121
C147	5-166	8832
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C403	8-10	23943
C404	8-15	7582
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C406	8-30	8625-9224
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CR403	8-5	20474
CR404	8-5	20474
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J201	7-4	12357
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K101	6-1	19665
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K103	4-28	22276-0014
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K104	4-35	14485
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K107	2-68	12587
K107	2-68	12588
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R129	5-185	207-0500
R130	5-186	209-9201
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R133	4-10	8915-0503
R134	4-5	201-0103
R301	3-43	8915-0101
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R305	3-10	200-0470
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[1] Specify crystal frequency in megacycles in place of * to complete part number.

Dependable Electronic Equipment Since 1928

ARCOC-T25A-1
May 1960

7010098
Printed in U.S.A.